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TETANUS.*

By P. Graffagnino, M. D., F.A.C.S.
House Surgical Officer, Charity Hospital.
AND
J. M. Davidson, M. D.
Admitting Officer, Charity Hospital.
New Orleans.

"Statistics can be made to show anything, even the truth," so said a well known English authority, as recently quoted by Dr. William Mayo. How well this applies to statistics on the treatment of tetanus can be easily verified by a perusal of recent literature on this subject. But too truly did Dr. Herman B. Gessner state, in his review, that the measure of the value of therapeutic methods must necessarily be clinical results. Too often, conclusions relative to these results are hastily confirmed on a small number of cases. A general statement may be made that the more limited the opportunity for observation, the more positive are the views expressed as to the efficacy of this or that remedy or method in the treatment of tetanus.

For instance, from time to time, most enthusiastic reports appear in the literature regarding the brilliant results obtained by the use of antitoxin as a specific application by a particular route, the writer reporting from one to eighteen cases; whereas Sir David Bruce, as chairman of a committee by the British War Office, who studied 1,424 cases and whose knowledge of this disease is probably greater than that of any other writer, says antitoxin has no power of neutralizing toxins already fixed in the nervous system and, if a fatal amount of toxin has been absorbed, no amount of antitoxin will save the man's life.

Of the first 1,000 cases studied it could be positively stated that 500 received prophylactic injections and of these 363 recovered, giving a death rate of 26.6%. Of the 239 cases who almost certainly received no prophylactic serum, 100 recovered, giving a mortality rate of 58.1%.

In a final analysis of the cases studied by this committee, it says: "From the figures, no case can be made out either for or against the intraspinal route for the therapeutic injection of antitoxin and no useful deduction can be drawn as to the influence of dosage on the curative action of antitetanic serum".

Dr. Fred Murphy, in Keen's System of Surgery, Volume VII, states that the treatment of clinical cases of tetanus is unsatisfactory and uncertain but in view of all experiences, antitetanic serum should be given in large doses.

Ashhurst, probably the most enthusiastic American believer in the use of antitoxin as a potent factor in reducing the mortality, reports a series of eighteen cases from 1906 to 1920, with a mortality rate of 38.8%. He believes that antitoxin should be given in initial doses of 100,000 units subcutaneously; or 20,000 to 30,000 units intravenously; or 3,000 to 15,000 units intraspinally the first 24 hours and repeated as indicated in 18 to 36 hours. He is a strong advocator of the intraspinal route.

Miller, in a recent analysis of 116 cases occurring in the Massachusetts General Hospital from 1872 to 1922, claims that the mortality rate has

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gradually declined from 65% in 1910, to 40% in 1921, and he attributes the decline to the early use of antitoxin in large doses, especially by the intraspinal and intravenous routes.

Colonel Sir William Leishman and Major B. Smallman, analyzing 157 cases, hold that their results throw very considerable doubt upon the advisability of applying the intraspinal or intravenous routes, either alone or in combination and seem to indicate considerable virtue in the employment of the subcutaneous and intramuscular routes. On the other hand, Nicoll is a firm believer in the use of large doses of antitoxin, especially by the intraspinal route and maintains that the subcutaneous route is of extremely doubtful value.

Major H. R. Dean, analyzing a series of 25 cases, reaches the conclusion that the most efficacious method of administering antitoxin is by the intravenous route, while Sir David Bruce, Andrews, Golla, Sherrington and others, are strong advocators of the intraspinal route.

Because the writers have seen so many cases of tetanus in this Institution and having noted the great mortality in cases treated by various doctors therein, irrespective of the method of treatment, we thought it might be of some value to carefully review and analyze, in an unbiased manner, the cases treated in this Institution. With this subject in view, we are presenting an analysis of the cases treated in Charity Hospital from 1906 to 1923. We are not unmindful of the fact that Drs. Gessner and Adiger, in 1916 and 1918, reviewed these cases up to that time and to their work we must acknowledge a debt of gratitude.

There are 627 case records recorded in Charity Hospital from 1906 to 1923, which form the basis of this analysis. These cases may be classified as follows:

CHART I.

Adults—Male, 203; female, 82; white, 98; colored, 187. Total, 285.

Children—, 306; male, 204; female, 92; questionable, 10; white, 140; colored, 166. Total 306. Tetanus neanotorum, 36.

Sex—Male, 407, white, 173; adult, 69; children, 104; colored, 234; adult, 134; children, 100. Female, 184; white, 65; adult, 29; children, 36; colored, 119; adult, 3; children 66.

Race—White, 238; colored, 353.

CHART II.

Site of wound—	
Foot and toes	327
Hand and fingers	63
Leg	16
Arm	20
Knee	9
Back	9
Head and face	32
Teet	1

Analysis of the above table presents in a graphic form the site of the wound associated with tetanus and, as to be expected, the extremities predominate.

CHART III.

Type of injury:	
Abscess (inguinal)	1
Splinter	163
Nail	122
Firecrackers, Blank cartridges, Air gun	23
Gunshot wound	6
Incised wound	44
Crushed wound	42
Burns	6
Brush burns	38
Punctured wounds (excluding nails)	16
Ulcer	3
Abortions	15
Tetanus neanotorum	36
Morphine addicts	9
Infected pimple	1
Vaccination	3
No history of injury	4

The above table presents an interesting study of the type of injuries often

Chart IV

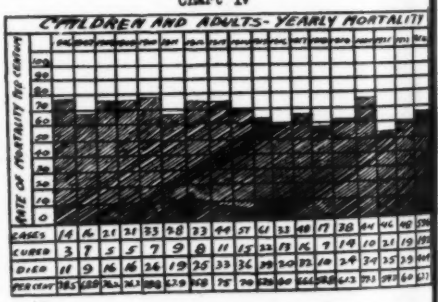
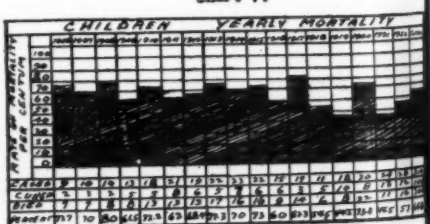


Chart V.



associated with tetanus, and among the unusual we find a great number of abortions, morphine addicts and simple brush burns.

Chart VI.

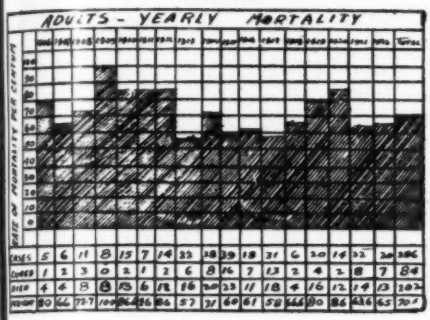
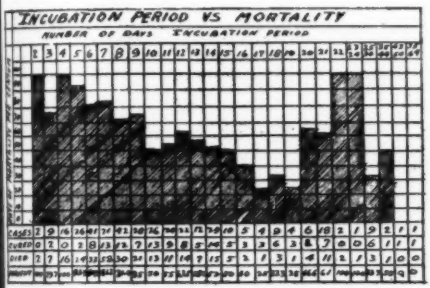


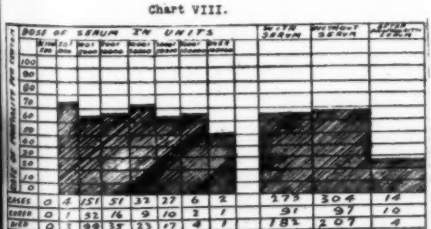
Chart VII.



Incubation Period.

Analysis of the whole number of cases confirms the law already laid down, that the shorter the period of incubation, the greater the mortality. And yet we see in few instances, hard to explain, cases with an incubation period of three days that apparently recover, while others with an incubation period of twenty to forty-four days have a fatal termination. Is it not possible that the doubtful cases, unreliable histories, virulence of the infection, and possible complications that are not considered while studying figures, could explain these discrepancies?

Chart VIII.



Effects of Treatment According to Dosage and Cases Treated Without Antitoxin.

This contrasts the total number of cases treated with antitoxin numbering 273 with a mortality rate of 66.6% and the total number of cases treated without antitoxin numbering 304, with a mortality rate of 68.08%. A careful study of this chart will reveal the fact that tht death rate varied very little, no matter how much antitoxin was given. There were as many deaths and recoveries when only 500 to 1,000 units of antitoxin were given as when over 100,000 units were administered.

Prophylaxis.

All writers agree that the value of antitoxin as a phophylactic is now estabilshed beyond a question. Our report shows 14 cases that received a phophylactic injection of antitoxin and contracted tetanus with a mortality rate of 28.57%, showing a marked decrease in the mortality rate.

Chart IX

AMOUNT OF ANTITOXIN AND METHOD OF ADMINISTRATION

DOSE IN UNITS	CASES	DIED	CURED	T	V	S.C.	M.T.	M.C.	I.M.	I.V.	W.	S.M.	T.V.S.	T.V.S.	S.V.M.	T.M.V.
BELOW 500	0	0	0													
500-1000	4	3	1			4										
1001-5000	151	99	52	1		36	97	1	2		5			1		
5001-10000	51	35	16	1		5	35		2	2		H	1	2	1	
10001-20000	32	23	9			6	8		2	2		6	1	5		1
20001-50000	22	17	10			4	2		3			5		7		1	4
50001-100000	6	4	2			1			1			1		2			1
OVER 100000	1	0	1														
TOTAL	272	181	91	2		56	0	9	6	0	28	1	1	19	1	1	6

Here an effort has been made to classify cases according to the method of administering antitoxin. It is to be noted that very few cases received antitoxin by one particular route, most of it being given in combination. For this reason, we were unable to classify the results obtained by each method of administering antitoxin.

Other Interesting Features.

Magnesium sulphate injected intraspinally. Cases, 2; cured, 0; died, 2. Mortality, 100%.

Foreign bodies remaining on admission. Cases, 26; Cured, 11;died, 15. Mortality, 57.7%.

One case died after spinal injection of serum.

One death from anaphylaxis.

One case of re-infection with tetanus after 16 years. Died during the second attack.

Here let us review the recent experimental work and perhaps, who knows, the seeds of these experiments may bear fruit in the minds of some of you and lead to the final solution of this dreadful malady.

The fundamental observations of Marie and Morax, and Meyer and Ranson, which determined the fact that the toxin which was produced locally by the tetanus bacillus was carried to the cord by the axis-cylinders of the motor nerves, the sensory fibres never taking part in this transmission, remains established. However, Teale and Embleton proved, by the re-injection experiments, that after the injection of toxin in an extremity, within a short ti ne it is present in the blood, liver, spleen, etc., and even in the nerve of the opposite extremity, results which could not be possible if the toxin were conducted entirely by the axis-cylinders. The latest evidence seems to point at least to a partial conduction of toxin by the lymphatic route, and that tetanus toxin appearing in the blood stream and other tissue can be neutralized by antitoxin at any stage in its passage before its final and relatively undissociable union with the ganglion cells.

Types of Tetanus Bacilli.

Captain Tullock has been able to differentiate four types of tetanus bacilli by means of the agglutination test. Examination of 100 cases suffering from clinical tetanus, showed 41 cases of type 1, 20 cases of type 2, 35 of type 3, and 3 of type 4. So far as known, antitetanic serum prepared in the routine way has the same effect on all types, neutralizing the toxin in any one or all. In 23 cases, not suffering clinically from tetanus, he found the tetanus bacillus and divided them into the four groups—17 cases belonged to type 1, 3 to type 2, 2 to type 3, and 1 to type 4. Comparing these figures with those obtained from the analysis of 100 cases of clinical tetanus, he found that while 74% of the cases with tetanus bacilli in the wounds belong to type 1, only 41% are found with clinical tetanus. The mortality of these types in which special groups were established, is as follows: Type 1, 11%; type 2, 25%; type 3, 35%, and type 4, 0%. It would seem that type 1 was the most prevalent infection, accompanied by a relatively low mortality, while types 2 and 3, the less frequent, are more virulent.

Method of Injection of Antitetanic Serum.

Professor Sherrington performed a series of experiments on monkeys for the British War Commission. Ten control monkeys, and ten receiving the antitoxin subcutaneously, all died. Of twelve treated intra muscularly, all died. Of sixteen treated intravenously, ten died, giving a mortality rate of 62.5%. Of eighteen treated intraspinally, five died, with a mortality rate of 27.7%. The impressive part of this experiment was the method of administering the antitoxin high up in the cervical region.

The laboratory observations on the fate of bacteriologic spores in the animal body, by Koser and McClelland, reported in 1917, are of particular interest in view of the late development of the clinical symptoms in many of the reported cases. These observers find that the spores of the bacillus tetani may persist in experimental cases at the site of inoculation for four months and in the liver and spleen for two months.

An impartial analysis of all case records studied forces us to the conclusion that the status of antitoxin in the treatment of tetanus is as yet not definitely established and that its value as a curative remedy awaits indisputable demonstration. However, we are of the firm belief that in view of the known properties of antitoxin to neutralize the toxin of the tetanus organism and its action, not only as a preventive but in lengthening the incuba-

tion period and attenuating the virulence of the infection where it occurs in spite of the prophylactic use, antitoxin is the specific remedy for tetanus. Further experimental work as to preparation, dosage, mode of administration and efect on the living tissue, will in time bring about the desired end.

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DSCUSSION.

Dr. E. Denegre Martin (New Orleans): We must bear in mind that these are statistics from the Charity Hospital. It would be important to know how far advanced these cases were. We have had probably twenty of these cases, and of the twenty I think two survived. They came in almost in articulo mortis. I believe there is really nothing to be done in advanced cases. My observation (I have had about 30 cases) is that the death rate will depend entirely upon the virulence of the infection.

Another thing is to be said, that in private cases we get them immediately, antitoxin is given immediately, we delay the effect of the poison, and if a sedative is given these cases will do well. We have reported eight cases cured with chloratone. These were young people and they were taken in time. The initial dose of antitoxin was given subcutaneously, which I think should be done. Whether it is more effective intraspinally is something I cannot say. Then giving chloratone to control the convulsions, these cases do well. I have had one instance of the use of sulphate of magnesia, but that patient was practically dead at the time. It does control convulsions if given in time.

I have not made up my mind as to the best method. This paper brings out the fact that we are not agreed on the treatment of cases by any special or satisfactory means. But you can make up your mind that if the poison is sufficiently virulent we have nothing to counteract it. How often do we see cases of chronic tetanus walking around and getting well with absolutely no treatment?

Dr. L. A. J. Brennan (New Orleans): One point must be considered here, and that is the interference with wound in these cases. I believe that serum is best used as a prophylactic. Serum therapy is the thing to use where we interfere with wounds predisposed to tetanus. If the wound is let alone no doubt the case will get well by using sedatives and nourishing the patient; but if you have occasion to interfere with a wound or to open it up for drainage, there is where I think the serum comes into play therapeutically. It neutralizes the new poison that is liberated. The organism as a rule grows better where there is secondary infection. In those cases that show infection, I think the wound should be opened up early and drained, not using the scalpel, but some blunt instrument, and thus the wound should be left alone. The patient should be given a prophylactic dose in the bebinning to ward of tetanus. After this stage, whenever any interference with the wound is indicated there should be a large prophylactic dose of antitetanic serum given, and I believe these cases will get well, provided they are well fed and given sedatives so they will not die of nerve exhaustion or starvation.

FRACTURE OF THE LOWER END OR BASE OF THE RADIUS.*

BY JOHN L. WILSON, M.D., F.A.C.S.,
ALEXANDRIA, LA.

Fracture of the lower end of the radius is the most frequent fracture with which physicians have to deal. This fracture occurs next in frequency to fracture of the ribs, and constitutes ten per cent or more of all fractures. The greater percentage of such fractures is met with by the general practitioner, and not by the general surgeon, and for this reason the treatment of these fractures is carried out by the physician, which makes it very important that we should be posted as to the pathology, etiology and treatment of this fracture.

We have had many notable contributions to our knowledge of the etiology and pathology of these fractures as well as to the treatment of them, since the original contribution by Colles in 1914. Prominent among the contributors of recent years may be mentioned, Scudder, Roberts, L. A. Pilcher, John B. Murphey and Fredrick J. Cotton of Boston. As I understand it two principals are involved in the causation of this fracture, traumatic force applied to the extended or outstretched hand, with its effect upon the peculiarly anatomically formed lower end of the radius, thin

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cortical layer with cancellated bone structure, which renders it peculiarly susceptible to fracture from trauma when received in the manner described in this fracture.

I shall not attempt to describe the types of fracture, each case will present its difference, and the diagnosis of type should be left to the physician in charge of the case. The final authority as to the character and extent of the injury is the X-Ray, and resort to it should be made when practical to confirm the diagnosis of fracture, the type, and in the after treatment, to demonstrate the degree to which reposition of fragments have been secured. Antero-posterior and transverse views should always be taken of the wrist and arm.

The Silver Fork Deformity present in these fractures is characteristic of this particular fracture, so that there is usually no room for doubt of the nature of the injury, excepting in instances of complications, such as luxations, extreme impaction, and destruction of tissues in that region. In addition to the characteristic deformity we find only *partial* disability of the hand, displacement backward, fullness in front of the radius over wrist, loss of normal prominence of the ulnar head on the back of the wrist with fullness in front of the wrist. The hand is usually held in partial flexion. The above symptoms together with the X-Ray findings should complete the diagnosis. Complete and careful examination together with the history of the case will usually give one a good idea of the existing pathology of the average case.

Treatment should always be carried out under light anesthesia in this as well as all fractures. Ether, Gas, Chloroform, gives for a few moments or until light anesthesia is produced, causes muscular relaxation, and partial insensability to pain, which will enable the physician to adjust these fractures practically without pain and more satisfactorily to ourselves, as well as to give the patient better service. The selection of material for splints is of great importance to the physician, who has to treat these patients, the physicians in the country and smaller towns. We are not always situated so we can draw on the supply of splint materials usually supplied by the manufacturers, and we must have a suitable, available splint material. Many useful splints have been recommended and successfully used, by a number of good surgeons. The practicability of the splint, availability of material with which to make it is of vital importance to the patient and physician. For some years I have been using a splint suggested by Frederick J. Cotton in his most excellent book on Dislocations and Joint Fractures. This splint can be made almost anywhere that we may be called to treat these fractures. It can be made from a shingle, boxtop, or any like material which is almost always available.

I will now exibit the splint and explain the method of application. You will note the manner in which the splint is shaped, a notch is removed from the radial side where it presses over the ball of the thumb, which prevents pressure on the ball of the thumb when applied, allowing also free movement of the thumb, which is an item of great importance. The posterior splint also has a notch cut out so as to prevent pressure over the styloid process of the ulnar. These splints when properly padded and properly applied make an ideal splint in the treatment of this fracture, and will prove a great asset to patient, as well as a satisfaction to each of you in handling these patients. The distinctive feature of this splint is that it allows free movement of the thumb and fingers, and when the patient is discharged he does not have to use massage for weeks to overcome stiff fingers resulting from improper splints. In the application of a splint we should always remember the teaching of John B. Murphy. Don't ever attempt to reduce a fracture with a splint. We should first reduce the fracture under anesthesia, be certain that we have done so, and then apply the splints correctly, not too tightly. Remember that in the limb upon which we apply a splint for the treatment of a fracture, swelling will take place within 24 hours, and the patient may have disastrous results from our treatment should the splints and dressings be applied too tightly. We might have ischaemia and in some

cases Volkman's contracture resulting from the treatment, which would be a very serious condition.

I would also call your attention to Murphy's teaching as to the function of splints. He contended that we did not need perfect or superlative immobilization in the treatment of fractures, contending that some movement of the ends of bones would hasten repair. The patients arm should be shaved and when the splints, properly padded are applied, a two inch piece of Z O plaster should be carried around the lower end of the am and splints, below the thumb, another be carried around arm and splints above the wrist, and another at the upper extremity of splints, allowing the plaster to adhere to the skin, which will hold the splints in position. We may then apply a roller bandage over all to produce the required amount of pressure.

After the dressings are applied, the arm should be suspended in a sling. A piece of domestic 32 x 32 inches, folded diagonally and placed about the patients neck and arm makes an excellent sling.

The after treatment of these fractures is of great importance. We should see the patient the following day or within twenty four hours after the first treatment, and make note of the following symptoms and conditions, (a) swelling of the hand; (b) numbness or paresthesia of the hand or fingers; (c) cyanosis; (d) amount of pain; (e) complaint of general discomfort from pressure; (f) complaint of localized pain at or near any special point of pressure. The presence of any localized pain at any point of special pressure is a positive indication to remove the splints at once. All splints should be removed in from 3 to 5 days for the purpose of inspection. After the first inspection 24 hours after first treatment the patient should begin to keep the fingers limber by passive and active motion, even though such motion be painful. Within two weeks mobility should be given at the wrist. The anterior splint being retained as a protective splint after two weeks. The results of treatment when carried out properly with this splint should be good.

A NEW METHOD OF TREATMENT FOR CHRONIC SUPPURATIVE OTITIS MEDIA.*

BY M. P. BOEBINGER, M. D.,
NEW ORLEANS.

The success of surgery should be measured by the end product. The reporting of two cases must have some merit to justify the making of such a report. The radical mastoid operation is counted a success when it effects a cure, though the hearing be sacrificed. A modification of the radical mastoid operation that effects a cure and at the same time conserves the hearing, should be considered the proudest achievement in mastoid surgery. The author realized for many years that the radical mastoid operation is beset by many and serious pitfalls. For instance: Facial paralysis, failure to arrest the discharge and the possibility of a recurrence. These, together with the destruction of the middle ear and it's contents, make some other line of procedure a consummation devoutly to be wished.

The cases herewith presented offered no choice of procedure along beaten paths except the radical mastoid or the Heath operation. Imbuded with the belief that a rather simpler procedure than either of the above operations should effect a cure and at the same time conserve the hearing, the method and technique herein presented, were instituted.

It is not the purpose of the writer to discuss the usual methods of treatment employed by various aurists, nor to describe the technique or modification of the radical mastoid operation as first employed by Körner and later by Heath, Ballenger and Bryant. These all have their champions and advocates, and no doubt effect cures in certain selected types of cases. The question of long drainage, ventilation and irrigation from a surgical point of view is an important one.

A radical mastoid operation is never performed in the interests of the hearing function, and a statement to that effect should be made to the patient before the operation.

The dangers and accidents attending the radical mastoid operation:—The

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intimate relation existing between the tympanic cavity proper, the epitympanum, the mastoid antrum, the mastoid cells, the facial nerve, the labyrinth, external semicircular canal, the jugular bulb, the sigmoid sinus, the internal carotid artery and the meninges, even when normally located, emphasizes the possible danger of accident attending the radical mastoid operation throughout it's entire course.

The above cannot possibly happen to a skilled operator in doing a simple mastoidectomy, or in employing the writer's method.

Indications for the radical mastoid operation:—Briefly stated, is to convert the external auditory canal, tympanic cavity, aditus ad antrum mastoid antrum and mastoid cells, when diseased, into one wide-open cavity; to excavate all granulations and diseased bone, to destroy all membranous and muscular tissue lying within these limits, including the drum membrane, and to effect dermatization throughout the entire area, in the hope that by doing so, the ramifications of the disease will be terminated once and for all. The operation is a capital one, requiring extensive dissection in the most complicated bone in the human body.

The main objects in the local treatment of this disease are, first; to arrest the inflammatory infiltration of the mucous membrane of the middle ear, and to stop it's purulent discharge, and secondly; to prevent the development of serious complications.

Patients, as a rule, subject themselves to radical operative measures only when threatening symptoms appear.

When these are lacking, and if the power of hearing is not greatly affected, the patients prefer the conservative treatment, which may continue for years.

Description of cannula:--A gold needle of nineteen gauge, two inches long with smooth rounded distal end was made into cannula. The hub of the cannula is smooth within, (a Luer hub) and just beneath the hub, a thread of three-fourths of an inch long for the purpose of raising or lowering the cannula to fit the case. The cross-arms area two in number, three inches long and one-thirty-second of an inch in thickness and one-fourth inch in width, with numerous perforations at the ends, and made of plated cooper, which forms the letter X.

Author's technique:—A simple mastoidectomy is done in the usual manner for a chronic suppurative otitis media. The method pursued by the writer is to enlarge the antral opening, then to work upward towards the tegmen antri, using either chisel or gouge, keeping in mind always, that the surface landmarks, the linea temporalis and the superior wall of the external auditory canal is about, but not quite, the safety limit or danger zone.

The Author continues to work upward and to remove overlying osseous tissue until a probe introduced through the antrum, aditus ad anrtum and middle ear proves that you have reached a parallel line with the tegmen antri then the attention of the operator is next directed to preparing the parts before the introduction of the Author's special cannula. All rough edges and projections are removed.

The excavation is irregular in contour, extending from the tegmen antri above (because antrum is now practically obliterated) to and through the mastoid tip below and from the posterior border of the osseous canal wall backward, usually to the limit of the diseased osseous tissue. A careful survey is now made of all parts in order to ascertain if any unopened or diseased cells have been overlooked. The writer then passes a probe into the middle ear and takes soundings, as it were, in order to ascertain the direction of the probe and to the size of the opening which leads to middle ear, and to enlarge and remove any obstruction or interference to the passing of the cannula, which should be introduced into the midlle ear with the same ease as the surgeon passes the probe. No force must be used, and if any interference is noted, this must at once be corrected. The surgeon should always gently curet in the neighborhood of the antral orifice of the aditus for fear of dislocating the incus. The field should now be inspected, and the introduction of the author's cannula follows. The distal end is introduced into the middle ear and remains there. The

cross-arms are sutured a safe distance away from the wound into healthy skin, using silk material. A drain of plain gauze is placed into the mastoid wound and the edges of the wound approximated with michel clamps or absorbable sutures. A small opening is made by means of scissors through a gauze dressing and head of cannula uncovered. The after treatment for mastoid wound is same as that employed for simple mastoidectomy.

Solutions used :—Acid Boric, one dram to quart; normal saline solution; sterile water; solution of nitrate silver, 1 per cent and 2 per cent; solution of Formaldehyde, 1-2 per cent to 1 per cent; alcohol solution, 50 per cent. The Author believes his results came from use of normal saline solution three to four times daily and finally using alcoholic solution of 50 per cent strength every morning and night.

How solutions were used:—Small metal tip to which a piece of rubber tubing was attached. The metal tip was introduced into hub of cannula and to other end a large Luer syringe 10 C. C. filled with solution was used to irrigate middle ear.

Amount used:—The personal equation of the aurist should play an important part here. However, the Author advises free irrigation.(Often and plenty.)

Failures:—On many occasions, the writer was forced to remove cannula from wound and middle ear on account of blocking of the tube, (especially was this due to use of AGno. 3. This is done with ease. The granulation tissue and tract left open from tube was cocainized, the material removed from lumen, and the tube sterilized, and reintroduced, then not sutured to skin, but fastened by adhesive strips, which the Author highly recommends, as a simple and safe procedure.

Keeping the wound clean beneath the cross-arms is much easier and simpler than in the writer's original model, which did not have cross-arms, but was made with a disc, which prevented the writer from keeping the parts clean, a source of much annoyance.

Time for cure:—By the use of cannula and irrigation, the first case required ninety days. In the second case, five months was required in order to effect a cure. This was probably due to acute mastoiditis and subperiosteal mastoid abscess.

REPORT OF CASE

E. W., age seven and a half years—white female.

Examination of right ear negative. Nose and throat negative.

Examination of left ear—Chronic Suppurated Otitis Media. Profuse discharge, acute mastoiditis, sub-periosteal mastoid abscess.

X-Ray examination showed necrosis of mastoid process.

Patient was ordered to Presbyterian Hospital and operation performed December 29, 1921. Treatment continued until June 10, 1922.

Examination of left ear at present shows almost normal drum membrane. Hearing distance for whispered voice 24 feet. Watch test about one foot.

DISCUSSION.

Dr. J. D. Martin (New Orleans): We have had a great deal of trouble in these cases and have tried every known cure for them, but even after radical mastoid we have sometimes found them almost as bad off as before, and worse, in fact, as the hearing had been interfered with. This is the first time I have heard of Doctor Boebinger's new method, and I want to know something more about it.

Dr. Homer Dupuy (New Orleans): Someone has said "Be not the first by whom the new is tried, nor yet the last to lay the old aside." But in mastoid surgery we are constantly casting the old aside and trying the new, which goes to prove how inefficient, how unsatisfactory is mastoid surgery for the relief of chronic suppuration of the middle ear, because we must admit that the mastoid operation for acute troubles in the middle ear and in the mastoid is a proven achievement in the surgery of the temporal bone. We are now talking about chronic cases of middle ear abscess for relief of which, our mastoid surgery is most unsatisfactory, so I will cast aside the old and try the new.

The beautiful part about this case is that the drum has returned to normal, the perforation is closed, and there is every reason to hope that Doctor Boebinger's method has affected this cure. So without going too much into technical refinments, let us admit that this seems to be a very important contribution. Yet do not be disappointed when you refer a patient with chronic middle ear abscess to the otologist that a brilliant result is not easily obtained. For despite all therapeutic and surgical measures the chronic middle ear suppuration is quite a problem, still waiting for solution in many cases. Let us hope that Dr. Boebinger has added something useful to our armamentarium with this new wrinkle in our surgery of the mastoid.

Dr. M. P. Boebinger (Closing): I have only had experience with two cases, but I want to make a plea for other men to take it up and try it. We know that in any radical mastoid, say the Heath, it is a question of drainage.

This little girl that I saw had chronic suppuration for one and a half years, and she has been well for about one and a half years with a normal drum and good hearing.

THE TREATMENT OF TINEAL INFECTIONS OF THE HANDS AND FEET.*

By JEFFREY C. MICHAEL, M.D.,
HOUSTON, TEXAS.

Infection of the hands and feet with various fungi is exceedingly common. Included in this category are such rare infections as those with blastomyces, sporothrix, actinomyces, and odium albicans, but this paper deals only with the more common infections with epidermophytons or trichophytons and designated clinically under various names; epidermophytosis, tinea eczematoid and others.

During the warm months this condition constitutes between 50 and 60 per cent of my practice. Not only is it common, but it is tenacious, recurring time and again after apparent cure. These qualities make it an important and interesting subject, especially from the standpoint of therapy. My own experience, summarized herein, is based upon the observation of approximately 750 cases seen in the last thirty months of private practice. The diagnosis of many of these cases has been arrived at purely by their clinical appearance, though a goodly number have been definitely proven by microscopical and cultural study. The latter means are to be advised in all cases, though at times the demonstration of the fungus is exceedingly difficult and time-consuming. According to Darier[1], it is possible to demonstrate fungi in approximately 80 per cent of cases of dysidrosiform eruptions of the hands and feet, and the importance of basing treatment upon certain knowledge of the cause of the condition makes an attempt, even an exhaustive one, important. Mitchell[2] also insists on the detection of the fungus before treatment is begun, basing his demand for microscopical examination on the possibility of confusing a dysidrosiform eruption due to a fungus with one due to external irritants.

*Read Before the Louisiana State Medical Society, April 24-26, 1923.

The treatment of this disease varies in certain particulars according to the type present in the individual case. White and Greenwood[3] have proposed a satisfactory classification of the various forms and it will be followed in this paper. They divide it into the vesicular, macerated, macular, hyperkeratotic, and lichenoid types. It is uncommon to see the disease present in only one form; the large majority of patients presenting several or all varieties of it. Besides the pure types, various complications may be added to the clinical picture; these complications resulting from a superimposed infection with pyogenic organisms. Needless to say, the complications must be dealt with effectively before treatment of the disease itself can be undertaken.

The aim of treatment is, of course, the eradication of the causative fungus. These organisms inhabit not only the corneous layer, but invade at least the more superficial strata of the rete. With the remedies in present use, it is hardly possible to penetrate to this depth with fungicides in sufficient concentration to destroy both mycelia and spores. Mycelia disappear rather rapidly following the application of any parasiticide, especially if contained in an ointment base. But the spores remain viable as indicated by the more or less rapid recrudescence of the condition as soon as a growth restraining application is stopped.

Under these circumstances treatment must be based upon general principles, which are:

(1) Mechanical or chemical removal of epithelial debris and corneal layer (curette, keratolytics).

(2) Destruction of fungus by drugs (benzoic acid, potassium permanganate, chrysarobin, iodine, phenol, etc.)

(3) Alteration of cellular activity by physical means (Roentgen-ray, ultraviolet light).

(4) Prophylaxis (sterilization of personal clothing and prevention of contact with infected material).

In addition to the foregoing there is another important feature of treatment that should be mentioned. This is that disappearance of the symptoms of the disease does not mean necessarily that the causative organism has been eradi-

cated, and therefore all cases should be apparently overtreated before pronounced cured. Before discharging my patients from observation, I always prescribe Whitfield's ointment with injunctions to apply it daily for two months, and if it happens that the end of this period falls in the winter months, the patient is advised to apply it again for a month at the onset of warm weather.

With this tabulation in mind, I will now pass to a consideration of the treatment of each type of the disease.

Vesicular Form.

As commonly seen upon the feet and hands this type presents grouped, occasionally isolated dysidrosiform vesicles with clear, syrupy contents. No inflammatory areola surrounds the lesions unless pus formation occurs. As none of the epidermal inhabiting fungi appear to be pus producers, secondary infection with staphylococcus or streptococcus is the cause of the progenic complication.

In the treatment of an uncomplicated case it is my present custom to open the vesicles if they are not numerous and to apply potassium permanganate solution, 1:2000, for two or three days. When the vesicles are numerous, small, and deeply situated, as often occurs on the lateral surfaces of the digits, then Highman's[4] suggestion of soaking with warm hypertonic solution before the application of other remedies is put into effect. I have found potassium permanganate a splendid application for the vesicular type, though my results with it in stronger concentration, as suggested by Feldman and Ochs,[5] have not been gratifying.

When vesicles have ceased forming, or practically so, or when potassium permanganate has not caused a rapid subsidence of the condition, silver nitrate in 10 per cent solution is substituted. This is painted on every day or every other day. In fact, in the type of the disease with numerous grouped vesicles, I have recently begun immediately with silver nitrate. It converts an exudative condition into a squamous one more quickly than anything I have used so far. It is combined with ultra violet light, using a water cooled lamp without sufficient exposure to cause more than a mild erythema. The erythema, of course, cannot be seen on the silver nitrate treated areas but a sound patch of skin on the wrist or elsewhere may be used as a guide.

Fig. 1. Profuse eruption of vesicular type.

Fig. 2. Vesico-bullous eruption secondarily infected with pyogenic organisms resulting in ulceration.

This treatment has evolved itself in my practice largely by a process of cast-

ing around for something better, because medicaments that had been used were not entirely satisfactory. The black stain that is produces is a drawback but patients do not seriously object to the disfiguring effect.

I do not know the exact value of the ultra violet light in this mode of treatment. Clinical experience has shown, however, that quicker results are obtained when it is combined with silver nitrate than when the latter is used alone. It is too early to say that the combination of silver nitrate and ultra violet light is actually curative. No patient has been treated in this way sufficiently long ago to say that he has been cured. It may be mentioned, however, that several patients who had early recurrences following potassium permanganate, Whitfield's ointment, and roentgen ray, have so far, a matter of three to six months, had no return of the condition. A cure should not be presumed in this disease until the patient has gone through at least one summer without its return. Objection may possibly be made to this statement on the ground that the development of the condition after several months freedom indicates a reinfection rather than a recrudescence. Such an objection would not hold, in my opinion, for the reason that this disease is one of slow development, and if one can judge by the statements of patients it requires more than one warm season for it to develop to any extent.

Macerated Type.

Typically, this occurs on the apposing surfaces of the toes, less often on the finger webs, as white, sodden, thickened epidermis, which when detached reveals a red, exuding area. Fissures are often associated with it. It is so well known that further description is superfluous.

It is the commonest type of ringworm of the feet and is rarely absent when other forms are present. It is not particularly recalcitrant to well-directed treatment, but treatment must be vigorous and continued for several weeks or months before eradication of the infection can be thought of.

Fig. 3. A pricarily vesicular eruption which throughout involution is subsiding into the erythemato-squamous (macular) type.

Whitfield's ointment (acid salicylic 2.0, acid benzoic 4.0, Adeps Benzoat 32.0) was a more or less standard treatment for a number of years. This preparation has not lived up to its early promise, and in recent months substitutes for it have been proposed. Ruggles[6] suggested a formula (Tr. Iodine 4.0 Spts. Camphorae 28.0) which was said to be superior and in this estimate J. C. White and Sutton[7] agreed. My own experience with it has not been satisfactory.

Ruggle's second formula (phenol 0.65, Ung. Picis Liquida 6.0, Zinc Oxide 10.0, Ung. Aq. Rosae 20.0) is very useful in exudative examples of the macerated type where the conditions prevent the use of irritating drugs.

Several authors have spoken of the benefit derived from mechanical removal of the epidermis by means of a curette. Recently Sabouraud[8] has formulated a very definite plan of treatment based upon mechanical debridment. Sabouraud scrapes away all the sodden epidermis and then paints the denuded parts with 20 per cent Tr. Iodine in alcohol. This procedure is repeated every day for seven or eight days, and then the iodine solution applied for several

method is the most valuable yet offered. weeks. I believe that Sabourand's I have varied from his directions to the extent of curetting the disease area every other day and by using Iocamphen instead of 20 per cent iodine in alcohol. Iocamphen is a proprietary remedy suggested for this disease by Fordyce[9]. On days that he does not appear for treatment, the patient applies Whitfield's ointment morning and night, first removing any accumulated debris with a grity soap. After the first two weeks treatment, curettage need only be done twice a week. In approximately forty cases in which this treatment has been carried out, the result has been uniformly favorable. The large majority have required but one month's treatment, a few have needed six weeks to two months before being ready for discharge.

Macular, Hyperkeratotic and Lichenoid Varieties.

These varieties will be considered together, because their treatment, except in minor ways, is identical.

In the usual type of the macular variety, the lesion extends backward from the digits onto the dorsum of the foot, and hands, and occassionally presents a red, exuding surface.

In this type curative therapy must be delayed until the usual soothing applications have converted the condition into an erythemato-squamous lesion. The hyperkeratotic patches usually occur on the ball of the foot as yellowish, hard, oval, elevated plaques or on the sides of the feet as linear callosities. Lichenoid patches present oftenest on the surfaces below the ankle; occassionally on the back of the hands. The lesions are oval or round, brownish or purplish in color, and show the shagrinations characteristic of lichenification. The fungus is particularly difficult to find in the hyperkeratotic and lichenoid types and they are probably due to secondary changes from irritation and inflammation.

These varieties, with the exception of the exudative form of the macular type noted above, allow immediate use of strong keratotlytics. It is my custom to treat these types with Whitfield's ointment in full strength, sometimes increased to 10 and 20 per cent of salicylic and benzoic acids, respectively. Furthermore, roentgen-ray is an extremely valuable agent in these types; particularly of the lichenoid and hyperkeratotic forms. By the use of these agents, it is unusual to find a case that does not involute completely in from six weeks to two months.

Tinea of the Nails.

Approximately ten per cent of my cases have shown infection of the nails; the diagnosis being reached almost solely by clinical observation. In only one patient, have I seen tinea unguium without evidence of the disease elsewhere. This patient, however, gave a history

Fig. 4. Ringworm of the Nails.

of the occasional occurence of vesicles on the toes. It is important to cure the disease in the nails because they probably are a prolific source of reinfection of the skin. It is not an uncommon observation to see the disease limited to parts adjacent to an infected nail, suggesting that the disease has invaded the integument through continuity of surface.

The treatment of ringworm of the nail is founded upon the same principles as for tinea of the skin; namely, exfoliation and parasiticidal applications. In some cases the nails are so badly diseased that avulsion is indicated, but as a general rule removal of the nail is unnecessary. The procedure most commonly advised is scraping of the nail until it becomes as thin as is bearable and the application of Whitfield's ointment or of a saturated solution of sodium thiosulfate followed by 3 per cent acetic acid. Hodges[10] obtained a cure in his own case by scraping the nail and Whitfield's.

Fig. 5. Lichenoid type. Pustules are due to secondary infection from scratching.

Roentgen-ray is also of value. The best dose is one-quarter skin units weekly. In treating this condition I have followed the scheme outline above, and have had uniformly successful results in those cases in which the disease affected the portion of the nail distal to the lunula. When the entire nail or the matrix and proximal portion alone was infected treatment has not been as successful. In any event, cure can hardly be obtained in less than six months, and relapses are not uncommon. Provided the matrix is not involved, I believe that patients can be assured of a cure of tinea ungium.

Prophylaxis

No extensive studies have been reported upon the modes of infection of this disease. There can be no question that it is conveyed by means of socks, through the agency of laundries, and particularly in places where numbers of people go barefooted, as in gymnasiums and country clubs. Close personal contact such as obtains with husband and wife is another means of the spread of the condition.

A knowledge of these sources of infection points the way to the prophylaxis of the disease as well as the prevention of reinfection. Patients should either have their socks boiled, or if that would ruin them as it will silk socks, should soak the socks in gasoline for at least one hour before they are washed. Old bed-room slippers should be discarded and new ones used as soon as the disease appears to be cured. Old gloves should be cast aside. As for shoes, it has been my custom to have a powder consisting of 25 per cent of boric and salicylic acid dusted into them each day for a week while they are in use. If the patient is a frequenter of bathing beaches, gymnasiums, or similar places, he should be advised to purchase cotton slippers and wear them at these places instead of going barefooted.

Conclusions.

In tinea of the hands and feet successful treatment rests upon general principles, of which the most important are continuous exfoliation and the use of parasiticidal applications. To prevent recurrences it is necessary to apparently over treat the disease.

While the general principles of treatment apply to each form of the disease, it is necessary to use special methods according to the type present.

Silver nitrate combined with ultra violet light is of value in the vesicular type.

In the macerated form, the best treatment is thorough erasion of the sodden epidermis, followed by an antiparasiticidal application.

The macular, hyperkeratotic, and lichenoid types respond to roengen-ray and Whitfield's ointment.

In tinea unquium paring the nails, Whitfield's ointment, and roentgen-ray have been found satisfactory for the majority of cases. A few cases require avulsion.

Prophylaxis depends upon the recognition of the sources and means of contagion. Public places where people go barefooted are prolific sources of the spread of the disease.

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DISCUSSION.

Dr. J. N. Roussel (New Orleans),—As far as I can see there has been very little advance in the treatment of ring-worm of the hands and feet. I believe this is due to the fact that the ring-worm fungus is (according to Sabouraud) not killable by any drug of which we have any knowledge today. Like anthrax, the spores are not killable except by fire. There are drugs that seem to put a quietus on it, that put the fungus, as it were, in a state of innocuous desuetude, after which we can by exfoliative measures get rid of it. Go back fifty years, and you will find that they used the same drugs that we now use, outside of the one the Doctor mentioned, and they were just as successful as we are. I think it is notoriously the fact that we are not very successful.

I am glad that I have not as many cases as Doctor Michael's because they would drive me mad.

In the treatment of this condition I prefer to use a saturated solution of Salicylic Acid in Alcohol. It is clean, it does not ruin the patient's shoes (in which they are more interested at times than in getting rid of the ring-worm). In my experience, if the entire foot is painted with this solution twice a day for three or four days, and allowed to peel, repeating the process every fifteen to twenty days, we get better results than by other methods. The X-Ray is of distinct advantage at times, but, not always, by any means.

But what is the use of curing the average case? You cannot convince them that it is necessary to do certain things—that a pair of shoes they have only worn a month or so should be thrown away. They will not do it. If you cure them they put on the infected shoes and get it again. I do not see any sense in trying to cure them, and tell them so.

But the main thing to understand is the idea that you cannot kill the germ. I have never cured a case, they have just gone to someone else. Doctor Michael can cure his, but I do not, I know.

Dr. Jeffrey C .Michael (closing): I believe gasoline is the best thing to use for killing the spores in clothing. We see a good many of these cases among people who go to gymnasiums, swigging pools and beaches, or any place that people go barefooted a great deal, and I advise my patients, so as to prevent reinfections to get cotton slippers and wear them instead of going in their bare feet. As far as shoes are concerned, the best thing to do is to get rid of the shoes.

As far as cure is concerned, I can explain to a certain extent why Doctor Roussel does not cure his patients, and I think the reason is because he is pessimistic. This disease must be treated persistently. The physician cannot expect to get results by prescribing some particular preparation, telling the patient to report in three or four weeks, and if they are apparently well at that time, advising them to await further developments. Under these conditions there is recurrence in a short time. The case must be treated until the point is reached where one is practically certain that the condition is cured. The spores are hard to kill, but I think if one keeps up the antiparasitic applications that finally the organism is killed off.

"SOLITARY (NON-PARASITIC) CYST OF THE LIVER."*

BY H. V. SIMS, M.D.
NEW ORLEANS.

Lancet Volume 1, 1913. Page 951 Boyd.

Non Parasitic cysts of the liver are of two classes:

General cystic disease and solitary cysts.

General cystic disease is almost constantly associated with cystic disease of kidneys, and rarely also of the pancreas, lungs, spleen, and brain, and is congenital.

Of the solitary cysts 34 cases operated up to 1912, 24 were females, the average age being 26 years. Resection should be done if possible.

Tice Volume 7 Page 203.

Some cases have been observed to occur in infancy, and it is the opinion of many pathologists that the cases occuring in adult life are really cases that were congenital but have been latent a great part of life. Multilocular cysts in the adult usually appear after 50 years of age. Women and men suffer in the ratio of 3 to 1.

Some have taught that these cysts are inflammatory in origin, and begin as an intrahepatic pericholangitis. Others regard the process as a degenerative one. A certain number of liver cells having disappeared, the area becomes surrounded by a fibrous wall. Some regard the cysts as outgrowths from the bile ducts, or dilated new bile ducts. The theory has also been advanced that some of the hypoblastic cells develop irregularly and from cystic areas. The two most acceptable views are the inflammatory origin and the development from the hypoblastic cells.

Enlargement of the liver may be surmised to be caused by the presence of cysts when a similar cystic condition is discovered in the kidneys.

The cyst or cysts may be small and give rise to no symptoms or they may

*Read Before the Orleans Parish Medical Society, on October 22, 1923.

be so large as to fill the entire abdomen. They may be mistaken for hydatid cysts, ovarian cysts, or a dilated gall bladder. The cystic condition of the kidneys which is almost invariably present in general cystic disease can generally be recognized. The patient may present symptoms of uremia, and albumin is sometimes found in the urine.

When the cystic condition becomes manifest early in infancy, or is marked at the time of birth, the prognosis is decidedly unfavorable. When the cysts do not appear until adult life the prognosis is much better and may admit of successful removal. In cases coming on in adult life the cysts may increase to such a size as to produce very troublesome pressure symptoms and threaten life. In some of the congenital cysts, the patient may survive and the cyst become large later in life. In this way most of the adult cases are explained.

In the adult the cysts may tend to merge and form a lesser number but of a larger size than the infant. The portal spaces are fibrous and in them some cystic dilations. The larger bilary ducts appear normal. The cysts are usually the size of a walnut, though some have attained 2 pints, and filled the entire abdomen. On section the cyst wall is found to be composed of fibrous tissue. The contents of the cyst is usually a clear fluid but it may be darkish from hemmorrhage, and is sometimes thick and colloid. The fluid contains calcium oxalate, leucin, protein, creatinin,, cholesterin, urea, chlorides and epithelium debris, but not bile. There is a general tendency toward fibrosis throughout the liver. In the portal spaces numerous tubules are found lined with epithelium surrounding the interlobular veins. The cysts arise in the portal spaces in connection with these extensions.

Oxford Medicine. Vol. 3 Page 400.

Extensive hemorrhage into or rupture of a cyst may give rise to severe symptoms. In rare instances the cysts have been pedunculated. Maybe due to biliary retention, though when large the bile may disappear and the fluid may be clear. Like the simple cysts of the common bile duct females provide the vast majority of the cases.

Nelson. Vol. 5, Page 520.

Cystic distension of bile passages may result from obstruction by stone, scar tissue, tumors, or parasites.

Simple cysts, so called, usually single and comparatively rare, have been attributed to local obstruction of bile ducts, perhaps as a result of inflammatory change, perhaps due to congenital malformation. They are usually small and give rise to no symptoms, but occasionally may reach considerable size.

Annals of Surgery. Vol. 73, Page 62

1921. Eisendrath.

In 18 per cent of polycystic kidneys a similar condition is found in the liver. The diagnosis rests between a hydrops of the gall bladder with cholelithiasis, a hydronephrosis, omental cysts, or mesenteric tumors or cysts.

Keen's Surgery. Vol. 1. Page 863.

Says the cyst arises in the free border of the liver, and is frequently mistaken for an ovarian cyst, or a cyst or tumor of the mesentery, or omentum.

International clinics. Vol. 2. 30th Series.

Page 246.

Omental cysts have a portion of the omentum extending over the side of the cyst and drawn out in the form of a distinct pedicle. Tht cysts are in some cases derived from the lymphatic vessels.

In discussing cysts of the abdominal cavity Dowd states that the term mesenteric is generally used in describing cysts within the mesentery, mesocolon, mesorectum, or omentum, and that there is a distinct advantage in the use of the term, since these regions, as well as the cysts they contain, are anatomically similar. Up to 1920 46 cases of omental cyst formation of all kinds had been reported.

CASE RECORD NO. 371.

Brumfield, Alma—Lewiston, La. Admitted 6-25-23. Discharged 7-26-23. An unmarried negress, age 24, ocupation housework, entered Charity Hospital for the relief of "pain in abdomen."

F H—Negative.

P H—Usual diseases of childhood. Malaria. Began menstruating at the age of thirteen, regular twenty-eight day type, seven days duration, until last year when menses lasted but five days and at the present time but three days. There is marked pre-menstrual pain, same lasting after onset of flow. Last

menstrual period 6-25-23. About this time patient noticed mass in abdomen which has been growing steadily since. Pain appeared with onset of mass. No pregnancies.

P E—Reveals a well developed, well nourished negress of twenty-four, apparently not acutely ill. HEAD: Pupils equal, round, react to light and accommodation. Nose and ears negative. Mouth: teeth in fair condition, fairly kept. NECK: Negative. CHEST: Bilateral, symmetrical. Resonance and breath sounds normal; no rales heard. Heart not enlarged, regular, rhythmic, no murmurs heard. ABDOMEN: Extending from an inch and a half above the umbilicus to symphysis is a smooth, elastic mass about the size of an adult head: it has a fluid feel. It is fixed down below and freely movable above. Area over mass is flat to percussion: tympany in both flanks. Vaginal Examination: Mass can be felt.

EXTREMITIES: Negative.

Laboratory Examinations—URINE. Amber with a specific gravity of 1,010. Reaction acid. Negative for albumen and sugar. No indican. A few pus cells and casts. Admitted to ward with a temperatire of 99°. Pulse rate 120; respirations 20. Menstruating. No complaint. Given the usual preoperative care.

Pre-operative Diagnosis: Cyst of Right Ovary.

Operation 7-3-23. Dr. H. V. Sims, Opr. Associates: Drs. Gladden, W. Bradburn, H. C. Jones and Miss Berdon (Nurse.) Ether Anesthesia. Anethetist: Mrs. Killingsworth.

On opening the abdomen a large tumor, corresponding in size to about a seven months pregnancy, was seen filling the lower abdomen. The uterus was displaced to the left and jammed up against symphysis pubis. (A pre-operative diagnosis had been made by Drs. E. L. King, Gladden, Parham, Jones and Sims, of Cyst of Right Overy.)

An incision was made from symphysis pubis to the umbilicus and a tumor larger than an adult's head was found filling the lower abdomen. On close palpation it was found that this tumor did not arise in the pelvis, but apparently sprang from the liver itself, in the region of the right lobe. This fluctuating tumor was of deep purplish-red color, its base was about five inches wide and about one and a half inches thick, aparently of liver substance. Both kidneys were apparently negative and there semed to be no disturbance in the region of the pancreas or stomach—no apparent signs of metastasis. This pedicle was to some extent clamped, but principally sutured with deep sutures to control hemorrhage. After ligation the pedicle was cut and hemorrhage controlled with some difficulty by means of deep U sutures. The gall-bladder was about five inches long on the under surface of this tumor and was removed with tumor. Abdomen was closed as usual.

The tumor contained about 1,000 to 1,500 c. c. of unclotted blood.

An intravenous infusion of normal saline solution, 1,000 c. c. given on table.

P. O. Diagnosis: Probably Hemorrhagic Cyst of Right Lobe of Liver—Unriagnosed Tumor originating from Liver (?).

Pathologist's Report—

Gross description: Tumor from Liver. Mass of tissue weighing about three pounds, of a mottled, reddish-blue color. The outer surface is smooth, moist and glistening; doughy consistency. Blood vessels may be seen running on the outer surface. The cut surface is moist, glistening and bloody, very irregular, containing many cystic pockets filled with more or less shiny hemorrhagic material. Cutting into one of the firmer areas shows a moist, glistening surface, somewhat irregular, with a fish-meat appearance. The whole thing is very bloody.

Final Corrected Microscopic Diagnosis: Mass is made up of chronic inflammatory tissue, markedly edematous. Microscopic examination fails to reveal presence of liver substance in mass proper.

Progress Notes: Developed broncho pneumonia.

7-21-23—Patient doing well. Appetite good.

7-26-23—Allowed to go home and return to the Clinic.

DISCUSSION.

A letter from this patient received by me October 21, 1923, states that "she is doing extra well, is able to work, has no pains and feels like a new person."

Dr. Waldemar R. Metz: In 1916, during my tenure of office as House-surgeon of Mt. Sinai Hospital, New York, a woman was admitted with a diagnosis of right sided ovarian cyst and whose clinical history and physical findings were very much in keeping with the case Dr. Sims has cited in his interesting paper. She was examined by the Chief of the Division, his associates and by myself and was demonstrated to the the intern staff as a classical example of cystic tumor of the ovary. The patient was assigned to me for operation and I was surprised to find on opening the adbomen a large, reddish-brown mass, about the size of a mush-mellon, soft and boggy in consistency and in no manner associated with the pelvic viscera. On folowing the tumor upward I found it attached to the under surface of the liver, just beyond its free border and to the right of the gall bladder by a long pedicle. I exercised the mass at its pedicular origin by making a wedge shaped incision into the liver substance, suturing the wound with U-sutures of chromic catgut. I mention this case first because it is another type of liver growth that simulated an ovarian cyst and secondly as an illustration that upper abdominal pathology will at times direct its clinical and physical manifestations in parts far removed from the original site of trouble.

Last December a man was admitted to my service at the Marine Hospital here, whose symptoms I interpreted as pointing toward gall bladder disease. For some time previous to admission he had complained of pain in the upper quadrants of the abdomen, associated with disturbances of the gastric physiology and at the time of admission pre-

sented a slight but persistent jaundice. At operation I found a large solitary cyst of the liver with pressure on the stomach and the gall bladder. The cyst was removed without difficulty and the patient made an uninterrupted post operative convalescence. The cyst was opened, its wall scraped and the tissue examined for the hooklets, characteristic of echinoccus infection and none were found.

About a month after this Dr. Maes told me he had a similar case at the Touro Infirmary, so that while solitary cysts of the liver are undoubtedly not common, they are apparently not as infrequent as the literature would have us believe.

Dr. King: This patient had a very tense abdomen entirely filled by this tumor mass. She had never been pregnant. The mass could be felt through the vagina and did not disappear on catheterizing.

We all agreed on the diagnosis and in view of the fact that Dr. Keen has made a similar mistake we did not feel that the error in diagnosis was particularly reprehensive.

KNOCK KNEE AND BOW LEG*

H. THEODORE SIMON, M.D.,
NEW ORLEANS.

Knock Knee and Bow Leg are by far the most common of deformities of the lower extremities and comprise fully 15 per cent of al cases in Orthopedic Clinics. In all tables of statistics Bow Leg is the more frequent of the two (65 per cent) and it is likely that the actual percentage is much greater than appears on hospital records because the condition is thought to be of little consequence, while Knock Knee is considered by the layman and physician alike as a serious deformity and so seeks proper treatment.

Both deformities appear more commonly in the male than in female children, which is perhaps explained by greater weight and greater susceptibility. A large proportion of cases of Knock Knee actually develops or increases to an extent demanding treatment during adolescence, while most cases of Bow Leg in patients over fourteen years of age have existed from early childhood.

At two periods of life do these two deformities most often develop. First, in early childhood, when th upright posture is assumed; second, in adolescence, when rapid growth may lessen the stability of supporting structures and when the strain of laborious work

*Read Before the Orleans Parish Medical Society, on October 22, 1923.

Right Bow-Leg and Left Knock Knee

may be added to increasing body weight. The etiology of these two deformities, excluding those caused by local disease, is the erect posture, when the bones and joints are unequal to the task of sustaining body weight and to the strain of walking; therefore, our greatest consideration is malnutrition of the baby with its resulting changes in bony structure, namely, Rickets. If the deformities are severe, the body presents the usual evidence of general Rickets. However, in some instances, the distortion of the legs is the only sign of its presence.

It is rather difficult to explain why weak legs bend in one way rather than another. Theorizing as best we may, first it may be assumed that a slight deformity is present before the child begins to walk. In young infants it is not uncommon to find a tendency to outwardbowing of the lower extremities from intrauterine posture. This can be much exaggerated by the use of large diapers, also by the sitting attitude of the child. Now, when such a child begins to walk, if of a vigorous and robust type, he will be noticed to separate his feet widely, toe in and sway his body from side to side, all in all having a tendency to produce Bow Legs. On the other hand, let us recall a less robust child taking his first steps. Here due to muscle weakness and inactivity he assumes more an attitude of so-called

Same case after Ostealomy on Right Tibia and Left Femur

Marked Bow-Leg in nine-year-old boy. Note Angulation of Tibia and Rotation of Feet.

rest, his knees are slightly flexed and are pressed together; his feet are somewhat separated and are everted or toed out—these forces are having a tendency to produce a Knock Knee. In considering this latter condition it must be remembered that in the erect posture there is normally an inward inclination of the femur, thereby forming an angle at the knee of about 170 degrees, this angle varying with the breadth of the pelvis and is therefore more in adult male. In other words, in adults there is a normally existing condition of very very slight Knock Knee.

The diagnosis of these two deformities is obviously simple. The only symptoms being a pain or sensitiveness over the external or internal lateral ligaments of the knee joint depending on whether there is an external or internal angulation,—the patients tire more easily and are clumsy and have a poor sense of balance in the more aggravated types.

Some record of the deformity of every case seen should be made, either by X-ray Plate or just as efficient by tracing the outline of the lower extremities on a piece of paper. These give permanent records which can later be compared and improvement or digression be noted.

The question, "Will the child outgrow this condition?" inevitably needs an answer. No iron-clad rules or statements can be made but the general conception is: In Knock Knee a slight degree of deformity which is not progressive will be outgrown if the patient is in vigorous and robust health; if moderate or severe, it may remain stationary but more probably will become worse as time goes on unless treated. In Bow Leg, on the other hand, a slight or even moderate deformity will eventually disappear if active treatment of the constitutional condition is instituted, and providing it is in early childhood. If, however, after the age of six, spontaneous cure is unfavorable—all very severe cases of Bow Leg require active treatment.

The treatment of both Bow Leg and Knock Knee can be considered under three heads:

1. Expectant; 2. Mechanical; 3. Operative.

1. Expectant treatment comprises the proper medical and diatetic management of the predisposing cause of the deformity, if constitutional. Here it may be added, that aside from the routine anti-ricket measures, we find Cod Liver Oil of great benefit. For the past year I have used either the Parke-Davis Emulsion of Cod Liver Oil and Metagen or the Lilly Emulsion, known as Coco Vitamine. Both are a 40 per cent Cod Liver Oil Emulsion with the added vitamine products and especially the latter, with its cocoa taste, is extremely palatable and easily given to children. Improper attitude is corrected, predisposing ocupation in the adolescent is discontinued, the patient is encouraged to be off his feet as much as possible. Both night and morning the legs should be

Same as Three after Cuneoform and Linear Osteotomies on both Libra.

massaged and manipulated, being bent gently towards a corrected position.

2. Mechanical Treatment: When our Expectant Treatment shows no marked improvement or shows retrogression, then in mild or moderate cases of these deformities, braces may be used to advantage if the patient is under four years of age. The most efficient brace is the simple straight steel bar extending the whole length of the lower extremity in Bow Leg on the inner side, in Knock Knee along the outer. To this bar the knee is pulled inward in Bow Leg, outward in Knock Knee conditions.

3. Operative Treatment: When Expectant and Mechanical Treatment fail or in extreme cases where it is hardly advisable to submit the patient to their discomforts, operative measures, which consist of mechanical or surgical fracture with correction, should be instituted. In Bow Leg the seat of operation is in most cases the Tibia—either by a mechanical device (osteoclast) or with chisel and malet a fracture is made at the point of greatest curve and an attempt made to hold the leg in an over corrected position by a plaster cast until firm union has taken place.

In Knock Knee the fracture must be made as a rule in the femur just above the condyles—an open osteotomy with chisel and malet is preferable, and here again a plaster cast must hold the extremity until firm union.

Same as Three in Sitting Position. Note Knees and Ankles in Apposition.

A point worth remembering is that although firm bony union has occured there is still some likelihood of recurrence of deformity unless some form of support is used. As a general rule in all severe cases I have fitted a supporting brace which is worn for at least 8 to 12 months after the last operation.

In closing, I wish to cite two cases of interest: Figure 1 shows a Bow Leg of the Right Leg and a Knock Knee of the Left. Figure 2, the same case, after an osteotomy was done on the Right Tibia and the Left Femur showing practically perfect alignment. Figure 3 ,a nine year old negro boy with a most marked Bow Leg showing almost a ninety degree angulation of the Tibia with Marked rotation inward of the feet. Figure 4, the same case, after a cuneoform osteotomy in the upper third of both Tibia and a limear osteotomy at the junction of the upper and middle third of both Tibia, showing a practical cure. Figure 5, same case, in the sitting posture, with perfect apposition of knees and ankles.

THE UTERO-SACRAL LIGAMENTS AND THEIR RELATION TO DESCENSUS OF THE UTERUS.*

By John F. Dicks, M.D., F.A.C.S.,
New Orleans.

A mass of literature has accumulated dealing with uterine displacements. The round ligaments, so to speak, have occupied the center of the stage, to such an extent that our attention has been drawn from the other support that are

*Read Before the Louisiana State Medical Society April 24-26, 1923.

of equal importance in maintaining the uterus in its normal position in the pelvis. Experience with students in the Gynecological clinic has taught me that they invariably diagnose retro versions and flexions and can describe in minute detail the various techniques of the round ligament suspension, yet completely over look the position of the uterus from the stand point of its relation to the vaginal outlet. This fault is not alone confined to the students of medicine but to a large number of practioners as well. I have often witnessed operations upon the round ligaments for retro displacements with descensus of the uterus, with no attempt on the part of the operator to over come the downward sag of the entire uterus, the one idea is to correct the retro displacement.

My object in presenting this paper is to give due credit to each group of structures attached to the uterus and canal and to especially emphasize the mid supporting group which to my mind is most often overlooked.

Bonney of London has divided the elements comprising the sustentacular apparatus into three grounps.

1—The upper supporting group.

2—The middle supporting group.

3—The lower supporting group.

Bonney says that it is obvious that they all play their part in keeping the uterus in its normal position and that the yielding of any one of them causes increased strain to be thrown on the other. All the structures attached to the body of the uterus may be classified as the upper supporting group, under this head we have the broad, the round, and the ovarian ligaments. The mid supporting group consist of the utero sacrals and the lateral cervico pelvic or Mackenrodt ligament. The lower supporting group consist of the pelvic floor and fascia.

Bovee, I believe was the first to really focus our attention upon the utero sacral ligaments. From 1902 to 1908 he published many articles showing the importance of these structures and described various operative procedures which have been most interesting and instructive to the profession. He shows that as far back as 1850 efforts were made to utilize these ligaments in displacements. In this historical account he says that the early operation consisted in folding the ligaments with their peritoneal coverings without isolating them. Bovee's own technique consists in dissecting the ligaments free, then doubling them on themselves and sutureing them to the cervix below their normal insertion.

Professor Blaisdel of the division of anatomy of Stanford University has made a special study of these structures. He is of the opinion that there are three tissues involved, muscle, fibro elastic tissue, and peritoneal folds.

The utero sacral ligaments were thought b yolder anatomists to be purely peritoneal folds, but a careful review of the literature and a dissection of these tissues have convinced me that they are definite ligaments and are capable of maintaining considerable pressure and weight. They are doubtless one of the important structures that support the female generative organs.

The utero sacral ligaments arise from the bony pelvic floor on either side of the sacrum, they curve towards the median line and are inserted into the posterior surface of the cervix. It is true that when the abdomen is opened and they are sized with forceps or sponge holder, they merely appear as folds of peritoneal tissue which is endowed with considerable elasticity. In reality these folds are only the edge of a strong fascial sheet which extends in a circle about the pelvic floor.

The utero sacral ligaments have attracted very little attention from the operative stand point. The general impression seems to be that they are difficult of access and doubtful surgical utility. Bovee insists on their value, however, and Goffe has made the statement that they are the most rational structures we can use for restoring the uterus to its normal position.

My attention was first drawn to the importance of these ligaments in descensus of the uterus in 1914 by Dr. S M. D. Clark, since then I have shortened them many times and I have been much pleased with the results. The technique that we have employed differs in several respects from the one advanced by Bovee. The procedure is very simple, however. The pelvis must first be well packed off. By making upward traction upon the body of the uterus the

peritoneal folds containing the utero sacral ligaments are easily demonstrated. Several interrupted sutures are next introduced from side to side deep into these folds to include the ligament, they are then brought together and the sutures are tied in the mid line. The number of sutures to be introduced depends upon the amount of relaxation of the ligaments. Linen is the suture material of choice but twenty day chromic gut has betn used with satisfactory results. By drawing the ligaments together in mid line it shortens them and by so doing gives an upward and backward pull upon the cervix. It can be easily understood how the shortning is accomplished if it is remembered that the ligaments form a V with the apex at the cervix.

I wish to make my ideas as to the value of the utero sacral ligaments perfectly plain. I can not entirely agree with a recent article published in the Journal of Obstetrics and Gynecology of Australia advocating the shortening of these structures for complete prolapse of the uterus, but I do feel that they have a definite surgical value in descensus of the uterus associated with displacement. I do not wish to convey the impression that I am under estimating the importance of the round ligaments. I maintain that if the abdomen is open and we are correcting a displacement by the round ligament method and there is an associated descensus of the uterus the utero sacrals at the same time should be shortened. The procedure only lengthens the operation by a few minutes and the results in well selected cases are most gratifying.

DISCUSSION.

Dr. H. W. Kostmayer (New Orleans:) The fact that there are some 85,000 operations on the round ligaments means that someone has been wrong in handling retro-displacement of the uterus, and it has always been my impression that in any operation for suspending the uterus proper attention to the pathology would mean better results. Doctor Dicks' discussion of the utero-sacral ligaments is in line with this thought of mine. For a great many years I have not attempted to correct retro-displacement of the uterus without correcting the over length of the utero-sacral ligaments.

I think in this case the method is not so much to be discussed as the necessity for operation. The condition groups itself in my mind into these phases. There are two types of retroversion of the uterus—one is congenital and the other acquired. I believe in congenital retroversion of the uterus the anterior vaginal wall is too short and it has therefore held the cervix too far forward, and therefore the round ligaments and the utero-sacral ligaments are shortened. In the acquired retroversion shortening of the round ligament or the utero-sacral is sufficient.

A further group is between the retroversion and retroflexion. In the retroversion the pathology is this. The round ligaments have ceased to function, and utero-sacral ligaments have ceased to function, permitting the uterus to turn forward and the fundus to turn backward. In retroflexion the round ligaments have ceased to function, but the utero-sacral ligaments are still functioning and therefore the uterus is bent, and it would be ridiculous to shorten the round ligament for retroflexion of the uterus. (Illustrates on blackboard).

Dr. E. H. Walet (New Orleans): I would like to refer to one type I had occasion to observe lately, a case of prolapse in an old woman of sixty-six years, a woman weighing about 220 pounds. On examination I found the uterus dragged down under the symphysis pubis and the cervix just about emerging from the vaginal orifice. She had a rectocele starting away up and coming down. The anterior vaginal wall sometimes has a congenital defect, but she had a straight anterior vaginal wall without cystocele. Therefore she had a very marked rectocele high up. I availed myself of the fascial repair of the pelvic outlet. She was the mother of sixteen children, so she had trauma to account for the destruction of rectal fascia. I attempted this for the first time. My idea was to utilize the utero-sacral ligament; therefore I made a long itudinal incision through the vaginal mucosa to the recto-cervical junction and exposed the rectal fascia. Having done that I opened the posterior cul-de sac, and I got to the utero-sacral ligament about here (illustrates on blackboard) I took up the fascia of the rectum about 1 1-2 inches below the junction of the posterior cul de sac. I went up and took a bite of the utero-sacral ligament, much as he has, and then going around to the other side through the rectal fascia and the other utero-sacral ligament and tied that. In doing this you bring the fascia high up and shorten the utero-sacral ligaments. Then continue to suture your rectal fascia together, rescet the mucous membrane, sew it over the fascia and do a perineorrhaphy. t was two and a half months ago, and I am glad to say she is relieved. That makes me believe that Dr. Frank of Denver, who does much of this fascial repart based on the anatomical principles, is doing good work.

Dr. G. A. Mayer (New Orleans): I have had the good fortune to follow a good many of those cases that have had this operation performed. The cases that have first and second egree descensus, with the perineum in good tone, can be cured. It is possible to do away with sterility in certain cases by restoring cervix to seminal lake.

The technique that has been followed is the

same as shown in the last two pictures. We have had no hematoma and some of the women have become pregnant and were delivered without any trouble.

SOME OBSERVATIONS ON THE PHENOLTETRACHLORPHTHALEIN TEST OF LIVER FUNCTION.*

By Daniel N. Silverman, *M.D.*,
New Orleans.

When Aaron, Beck and Schneider in 1921 simplified the technic of administering tetrachlor and recovering this dye from the duodenum as a means of determining liver function, I started my series of tests. Through the courtesy of Dr. Geo. S. Bel, the medical department of Tulane University granted me sufficient supply of the dye in ampule form, as recommended by Aaron.

Briefly the method is as follows:

The duodenal tube is passed in the fasting stomach and allowed to enter the duodenum in the usual manner. The position of the tube has been verified by the fluoroscope in each and every one of my examinations. With the individual recumbent, he drinks 500 c. c. of water to produce a continuous flow. An intravenous injection of 1 c. c. representing 50 mg., of tetrachlor is made. The duodenal contents are allowed to drip into a porcelain dish containing ten c. c. of 40 per cent sodium hydroxide. This solution is changed every two minutes in order to leave no uncertainty about the dye appearing. The initial appearance of the dye is indicated by a faint purplish tinge. This color becomes more marked until a maximum color change is seen. Aaron gives the normal time of maximum appearance as 17 1-2 mins. Friedenwald and Gantt state that the average time of excretion in all normal cases in 13 8-10 mins.

With the introduction of the Rosenthal method (Dec. 1922) for the determination of percentage of phenoltetrachlorphthalein retained in the blood, Dr. M. P. Bowden, of the Touro Laboratory, and I began a series of examinations of liver function by this technic. It has also been our endeavor to correlate the results of the duodenal method with the results of blood serum analysis. These findings will be published in a subsequent article. If correct, the time of the dye elimination into the duodenum as a liver functional test will be of material aid to those making examinations of duodenal contents for other factors, such as the pancreatic digestion and the biliary secretions.

The phenoltetrachlorphthalein test is our best means of determining liver function . The appearance time of the dye may be normal in face of a chronic biliary infection. Massive destruction of the liver, as in cirrhosis and carcinoma, causes a delay in excretion of the tetrachlor.

The results obtained in some of my cases are shown in the accompanying chart.

THE PHENOLTETRACHLORPHTHALEIN TEST OF LIVER FUNCTION

No. of cases	Diagnosis	Date	Phthalein excretion	
			Initial time	time of maximum intensity
			min.	min.
1.	a. Syphiloma intra- abdominal)	10-27-22	15	18
	b. After anti-leutic treatment	12-20-22	13	18
2.	Hepatic syphilis	11-1-22	43	43
3.	Chr. Nephritis	1-9-23	10	14
4.	Chr. Appendicitis (operated)	3-17-23	18	20
5.	Chr. Cholecystitis	4-4-23	19	23
6.	Chr. Cholangitis	4-17-23	..	26
7.	Cholelithiases (operated)	9-15-23	17	20
8.	Chr. Bilary infection (jaundice)	9-21-23	..	31
9.	Tropical Sprue	10-4-23	12	12
10.	Hanot's Cirrhosis	10-5-23	None in 2 1-2 hours	
11.	Pellagra (dermatitis)	9-24-23	None in 1 1-2 hrs.	
12.	Chr. Cholecystitis	10-16-23	18	30

*Read Before the Orleans Parish Medical Society, on October 22, 1923.
(1) From the Department of Medicine, School of Medicine, Tulane University of La.

A PLEA FOR A MORE DEFINITE INTERPRETATION OF ABDOMINAL PAIN.*

By A. L. Levin, M.D.,
New Orleans.

Pain, nature's warning or danger signal, is a very wise provision of the Great Designer of the human body; it is the automatic valve in the human machine calling for repair. Investigation as to the cause of the deranged function of a certain mechanical device is the practical rule in the affairs of every day life. A careful examination usually precedes the decision as to the contemplated repairs and when the trouble is definitely located, the necessary plans for repairs are drawn and the expert mechanic proceeds with the work. In the human machine, the mechanism and functions of which are still at this advanced scientific age in the realm of mystery, when the signal pain is being heard, we proceed with our measures of aid in a different manner. The signal pain, naturally must be stopped first. A hasty examination very often is sufficient to decide on a plan of repairs or reconstruction and a rush job is affected. The result is in many instances disappointment and a painful scar as evidence of mechanical failure to locate the seat of the trouble. The numerous mechanical failures which come daily under our observation in the clinics and private offices should arouse our interest for deeper study and a better understanding of the most common seat of trouble, in the most mysterious closed box of the human machine—the abdomen. This being the object of my paper, I will proceed with the subject in a greatly condensed manner.

Pain in the adbomen is a long and tedious medical chapter to cover in this short space of time. R. W. Leftwich enumerates several hundred causes of pain in the abdomen. Again, abdominal pain is being classified as subjective and objective. As the subjective pains are usually hysterical, we shall not consider them and deal exclusively with objective abdominal pain. It usually spells pathology and may be due to a lesion of the skin, the subcutaneous tissue, the muscle, the peritoneum or the viscera. As most abdominal pain is local, e. g., that due to renal, biliary or appendiceal colic, gastric and duodenal ulcers, we shall consider them first and later on call your attention to frequent diagnostic errors.

In the discussion of abdominal pain, we must bear in mind the symptoms which form a complete chain of dyspepsia, i. e., epigastric pain, fullness, vomiting, nausea, flatulence, loss of appetite, furred tongue, constipation or periodic looseness of bowels, heartburn and acidity. Renal stone colic will often produce a typical history of dyspepsia as described and attract our attention to the gastro-intestinal tract. But a conscientious doctor who makes a complete urinalysis will easily locate the seat of the trouble, as exemplified by the following case:

A young man, aged 32, farmer, complained for several years of indigestion and pain in the right upper abdominal quadrant, radiating to the right lumber region. Several attacks required morphia for relief. The pernicious habit of sending dyspeptics to the X-Ray man for a gastro-intestinal picture, before even a specimen of urine is examined, should be condemned. The patient passed through the regular X-Ray routine, but without any definite information. When the next step of procedure, i. e., extraction of teeth was advised, he decided to change mechanics. The history led me to suspect his right kidney. A urinalysis revealed numerour pus cells, numerous red blood cells and casts. An X-Ray of the right kidney demonstrated plainly a very large stone in the right kidney. Nephrectomy cured the dyspepsia, and abdominal pain.

It is often quite difficult to differentiate between gall stones and right renal colic, but a careful analysis of the distinguishing features is often of aid. In biliary colic during an attack, there is severe and agonizing pain in the right hypochondrium; vomiting, sweating or shivering is frequent and even collapse may occur. The pain is likely to pass around into the right side and to the angle of the right scapula, or referred to the tip of the right shoulder. Jaun-

*Read Before the Washington Parish Medical Society, September 27, 1923.

dice of varying degrees will result if the calculus obstructs the common bile duct partially or completely. Sometimes an enlarged gall bladder can be palpated. The feces should be watched for a stone, passing it through a sieve. One attack predisposes to another, it is more common in women than men, fat subjects more than thin ones, and middle life is the common age. Of great value in the diagnosis are often the X-ray and the recent method of obtaining the bile by means of intraduodenal gall tract drainage (W. F. Monges, p. 367—Non-surgical drainage of the gall bladder, Lyon).

Renal Colic.—The pain starts in one loin and radiates downward to the thigh and to the testicle in the male, to the labium majus in the female. The urine contains blood, ureteral and kidney pelvis epithelium, pus in varying degrees, there is frequent micturition and small quantity of urine. Here again X-ray is of great value. The absence of pyrexia and tubercle bacilli in the urine will exclude kidney tuberculosis. In Dietl's crises, we may have the same symptoms and urinary findings, but a large hydronephrotic movable kidney may sometimes help us in clearing up the situation.

Appendiceal Colic.—This is the stumbling block upon which physician and surgeon have clashed and met many a Waterloo. Russell remarks on this subject, "Nothing is more valuable and nothing can be more misleading in medicine than personal or individual experience." This is specially applicable to the question of handling abdominal pain emanating from the appendiceal region and its radiating territories. One man calls in the knife the moment he scents appendicitis, another holds lingeringly to the dying faith in a stercoral typhlitis and perityphlitis." It is also of benefit to quote A. M. Willis (Virg. Med. Monthly, 49:573, Jan. 1923), "Statistics in the registration office of the United States show a steadily mounting number of deaths from appendicitis. Among the causes for this is the reduction of the number of rural practitioners, in consequence of which a practice of home medication has developed." A campaign to teach laymen that every abdominal pain is, possibly, due to appendiceal involvement, and that cathartics are contraindicated, might save many lives. Another factor is the selection of a surgeon for convenience sake and not considering the surgical aptitude of the physician."

For brevity sake, I will add my own mite of experience in this important field of abdominal pain in the form of the following "dont's":

1. Don't order a purgative on first sight.
2. Don't favor the application of heat, it favors increased peristalis.
3. Don't minimize an ordinary attack of indigestion, it is a revolutionary reaction of bacteria in the abdominal kingdom.
4. Don't fail to recognize a ruptured appendix on your second visit even when the patient looks somewhat improved.
5. Don't fail to carry out in all abdominal cases detailed palpation.
6. Don't fall in line with those who favor a routine sacrifice of the appendix upon the altar of surgery.
7. Don't fail to operate in any case with a history of previous attacks, a marked tenderness on deep palpation, or marked rigidity even in the face of an ordinary degree of leucocytosis.
8. Don't use morphia injudiciously.
9. Don't overlook gastric crises of tabes.
10. Don't forget syphilis of the abdominal viscera.

In regard to X-ray diagnosis of appendicular involvement, I wish to make the following remarks:

When the evidences present a picture of a classical type of appendicitis, it is not necessary to have an X-ray confirmation; operate as soon as indicated. In the indefinite case of indigestion, the X-ray is of value. Here I wish to emphasize from personal observation the following points: A 24-hour radiographic plate demonstrating a filled appendix is not a conclusive evidence. It simply means that the appendix is patulous. If after purgation to get rid of the barium, the appendix remains filled on a 48-hour or later plate, the evidences are more conclusive. A

definite cecal stasis with ileo-cecal kinking and distortion, even without visualization of the appendix, is also very important evidence. Here again, I wish to advise you that some of my cases with positive X-ray records of chronic appendicitis are free from any abdominal pain and indigestion for nearly two years without resorting to immediate appendectomy. The histories of some were very suspicious of a luetic taint and mixed treatment was resorted to. I also firmly believe that quite often in cases of innocent patulous appendices, the barium entering the lumen of the appendix remains there as a foreign body because the relaxed appendiceal structures have no power to expel the heavy metallic substance, thereby giving rise to appendicular trouble. I found barium in removed appendices months after an X-ray of the gastro-intestinal tract was made. Remember also that the lumen of the appendix is an excellent incubator for intestinal parasites, such as amoeba, the flagellates and pin worms. We must then bear in mind intestinal parasites as a cause of abdominal pain.

Angina abdominalis in gouty and arterio-sclerotic subjects can be recognized by the increased tension and the condition of the arterial wall. Abdominal pain in an anemic, poorly nourished and neurotic type individual, recurring regularly without any definite causes, and the pain is aching, tearing or darting in character, is most likely of a neuralgic origin. Fortunately it is rare.

An attack of gastric or intestinal crises of tabes is often mistaken for acute indigestion and a scapegoat is sought in the appendix, gall bladder or gastric ulcer. The character of the pain, lightening like, absence of knee jerks, ataxy or Argyle Robertson pupils will determine the diagnosis. Blood and cerebro-spinal fluid examination should be made.

The existence of Pott's disease in children giving rise to abdominal pain can be determined by the presence of spinal tenderness and rigidity and X-ray of vertebrae.

Plumbism as a factor can be recognized by the history and definite symptoms.

The diagnosis of pancreatic pain is not so easy. It is a severe deeply seated epigastric pain radiating to back and loins. Other signs of pancreatic disease, such as wasting, pigmentation of skin, and character of stool being bulky, offensive, with an excess of unaltered fat, may lead one to suspect the pancreas as the seat of the trouble. The determination of pancreatic enzymes in the duodenal contents by the recent methods is of great value, but the general practitioner without the aid of a well-equipped laboratory should adhere for the present to the points above mentioned.

Acute perforation of gastric, duodenal or intestinal ulcers present a characteristic acute, agonizing pain, board-like abdominal rigidity, not relieved by morphia, flexion of thighs, symptoms of shock, history of previous digestive disturbances and sometimes the presence of blood in gastric contents. It must be diagnosed early and closure of perforation affected, within 10 hours of the occurrence. Otherwise the prognosis is very grave.

Abdominal pain caused by gastric and duodenal ulcer.—Serious thought and consideration should be given to this type of pain. Many errors have been made and discouraging postoperative results are quite common. The cause of delayed pain in various types of ulcer is invariably pylorospasm. Other factors may cause it and it is not so easy to distinguish. Close clinical observation will establish the diagnosis in a large number of cases. The periodicity of the attacks, with remissions, the relationship of pain to food, acid curve of gastric contents, the presence of blood in gastric contents, also in the feces, a blood stain on the silk thread, localized pain, frequent vomiting, hematemesis and roentgenographic examinations are all important diagnostic aid. The pain and the behavior of the gastric secretions vary according to the location of the ulcer.

A differentiation between duodenal ulcer and gall bladder disease with or without stones is quite a difficult task. It might be of value to bear in mind a few useful points. In gall bladder disease with stones, the pain varies greatly in intensity and duration and may be

accompanied by fever and followed by temporary icterus; it is usually accompanied by nausea which is not relieved by vomiting; on palpation, the pain is usually over the gall bladder region.

Bear in mind that the roentgenographic diagnosis of duodenal ulcer is only presumptive and not authoritative. I remember one instance in the operating room where out of 5 cases operated on for duodenal ulcer, 4 proved to be gall bladder cases.

While discussing this phase of abdominal pain, I wish to relate briefly the histories of two cases which came under my observation, one over three years ago and the other about a month ago.

Case 1. A gentleman above middle age began to complain of intense periodic abdominal pain, accompanied by the usual chain of dyspeptic symptoms. The pain at times would be intense and lasting for hours. He lost considerably in weight. Neither physical examination nor laboratory findings had definite illuminating points to establish a diagnosis. The attending physician could no longer hold back the surgeons knife, so an exploratory was performed. A mass, involving the duodeno-biliary-pancreatic region was found and a gastro-enterostomy was performed. The mass was considered to be a duodenal ulcer of long standing, assuming a malignant character. The operative procedure brought several months relief, followed by agonizing pain. After a second long tedious struggle, the abdomen was reopened and an ulcer was found at the site of the gastro-enterostomy. A jejuno-jejunostomy was made with relief again for only several months and a third period of agonizing pain. This time I was granted the opportunity of studying the case with the surgeon who was at a loss as to what surgical move to make. The roentgenographic studies made several times demonstrated that the surgical routes were working well. After much deliberation and speculation, the surgeon hesitated to interfere a third time and referred the patient to me for "medical play", as he termed it. I resorted to the time-worn remedy, mercury and iodide, in spite of a negative blood and spinal fluid. It is a delightful end of the story, the patient is enjoying life once more for nearly a year.

Case 2. A gentleman also above middle age developed upper abdominal pain only two months ago. There was a vague history of a mild form of indigestion off and on for about five months. He was referred to me by his family physician to determine the cause of the upper abdominal pain. It would come mostly in the evening or during the night. Aspirin was sufficient to control the pain, an occasional vomiting spell would precede the pain. On physical examination, I though I could palpate a small mass at the right epigastric angle. The gastric analysis on two occasions revealed the presence of dark blood. An X-ray demonstrated plainly a definite duodenal irregularity and deformity. On several occasions, the vomitus contained specks of blood; the fluid of a gastric lavage had a slight bloody discoloration. Occult blood was positive in gastric contents but negative in stool. A strong suspicion of duodenal ulcer, probably malignancy was entertained by me as well as the surgeon. Medical trial for 10 days along the lines of duodenal ulcer failed to give any results. Laparotomy was decided upon and was performed by two of the leading surgeons. To my chagrin, the surgeons could not find the source of the pain as there was no evidence of ulcer or cancer. Hemorrhoidectomy was done. 'Cancer turned out to be hemorrhoids' was the remark made to me by the patient's closest friend, "now we can feed him on anything we want", was the next sentence. Four days after the operation, he was sent home. Five days later ,a sudden hematemesis ended his life before the surgeon could reach him. What was the cause of his abdominal pain, and where was the source of the bleeding? These questions are still unanswered. Neither the medical nor the surgical mechanics have been able to solve the problem definitely. This and similar accidents are often a source of worry to many of us, mechanics of the human machine. Can the keys to the most mysterious closed box of the human machine be found? Hence my plea for a more definite interpretation of abdominal pain.

1222 *Maison Blanche Bldg.*

SYSTEMIC DISEASES WITH TEETH AS THE PRIMARY CAUSE.*

BY CHAS. P. KELLEHER, D.D.S.
NEW ORLEANS.

Prof. Oral Surgery, Dental Dept., Loyola University; Sch. of Medicine; Senior Visiting Surgeon, Dental Dept., Charity Hospital.

One of the most important advances which has been made during the past decade in the science of medicine, and when I say medicine I mean it in its broadest sense which must include all branches of the healing art, has been the development of our knowledge concerning the role which disease in one part of the body plays in the etiology of disease in other parts of the body. The recent advances in dentistry have brought this field of work into very close relationship with that of medicine. Today it is necessary for the physician to take into account the condition of the teeth in formulating his diagnosis of a large variety of medical cases. It is equally necessary that a dentist make a careful survey and inquiry into the general condition of the patient before deciding upon dental procedure, for some of the systemic disturbances indicate need of thorough and radical dentistry, while under conditions of good resistance of the patient a more conservative measure may be preferable. The subject of focal infection is a big subject and cannot be covered in one evening. There is no question but what the importance of good teeth and their preservation has been pressed home to the public at large too effectively during the last two decades by the dental profession so that now many of the patients who have had this extensive dental work done in the past are now suffering from systemic lesions. There is no question but what the dental profession has allowed the pendulum to swing too far in the conservation of tooth structure, and today there is danger of having the pendulum swing too far back in the eradication of teeth for the purpose of relieving some systemic conditions. It marks a great step forward in health preservation that numerous scientific researches which have been brought forward during the last decade have served to prove unequivocally what some dentists have long suspected and what some physicians have believed;—namely, that there is a most important relationship between certain diseased conditions about the mouth, and systemic diseases. Yet, we must not forget in formulating our diagnosis that the mouth is only one place where we may look for the origin of these low grade infections. We find the origin of these low grade infections of the body in:

1. The Pelvis, which includes the Urethra in the male and the Tubes and Ovaries in the female.
2. The Appendix.
3. The Gall-Bladder.
4. The Head and Neck, which includes the Tonsils, the Sinuses, the Teeth and Gums.

All of these places in the body must be taken into consideration in running down a low grade infection. There is no question but what these low grade infections are a greater menace today to humanity than all of the diseases of bacterial origin combined, excepting possibly tuberculosis. Within the last quarter of a century we have seen two great changes come over the world. First, we have seen the average length of life per individual greatly increased. Secondly, if we look at the lists carefully we find that the causes of death have increased in some of the columns and decreased in others. There is for example an agreeable falling off in deaths due to typhoid, cholera and small pox, and increase on the other hand in the number of heart and kidney deaths, and those due to arteriosclerosis and anemia, and to certain other things too frequently regarded as a necessary accompaniment of old age. Quoting from Prof. Martin H. Fisher of the University of Cincinnati, he says; "Old age, in my opinion, is not so much the cause of many of the pathological changes attributed to it, but these changes are the cause of old age." He says further; "There is a physiological death, but I question very much from the people and patients that I have seen whether a physiological death ever occurs much below 90 or 100 years." The question now comes up, if we no longer die of the old causes, and it is conceded that

*Read Before the Orleans Parish Medical Society, on October 22, 1923.

we do not, then what is it that carries us away in our forties, fifties and sixties? Barring gross accidents and such diseases as cancer we now die largely of the direct or indirect consequences of low grade infections, the nature and prevention of which is only now becoming clear. We do not die of acute scarlet fever as we used to; we do not die of acute typhoid, of acute pneumonia as much as we used to, and most of us do not yet die physiologically, that is, of old age. In many cities where formerly there were hundreds of typhoid cases, today there are hardly enough to demonstrate the disease to medical students, but many of those who have been spared typhoid, die by newer causes. These newer causes of death are subtler forms of infection and subtler types of disease. They are largely systemic infections, low grade in their origin and spring from local causes, and are so very small that they are largely overlooked. Dr. Charles H. Mayo, in a paper some time ago, made this statement: "As we see things today, it means there will be far less surgery and less sickness when the full benefit of the knowledge of low grade infections becomes known throughout the world." Three fourths of the Mayo Clinic is abdominal surgery, nearly all of which can be traced to mouth infections. All this is being materialized by evolution. It will be indeed Utopian when the medical profession, the dental profession and the laity are all working together to stamp out all of the preventable diseases which are a menace to humanity. The time is coming when future generations will no longer die of low grade infections as we are today because the source and prevention of these diseases will be known and the effects of them will be realized. Periods of progress in medicine and dentistry have occured only as scientific and general knowledge have advanced. Yet, wonderful strides have been made in all lines of medicine during the past century by the public's appreciation of disease and its prevention; and this has been brought about more by the protection of the people by public health laws and the saving of children than through the knowledge of the use of drugs. It is a hundred years since we began to preserve meats and vegetables in the process of canning while hot and the exclusion of air by the means of sealed covers, but it was not until Pasture's time that we understood the scientific reason for this in the distruction of bacteria by heat and the prevention of the entrance of living germs by the process of sealing. It has been definitely shown first by Hunter of London, later by Rosenow, Billings and Hartzell, and many other American physicians and dentists that chronic diseases, acute diseases and special local diseases, such as arthritis, neuritis, iritis, nephritis, sciatica, acute paralysis and heart lesions come from mouth infections in many instances. Also that appendicitis, disease of the gall-bladder and ulcers of the stomach are caused by a mass of bacteria in the capillary circulation at the base of the mucous cells in these organs, and is caused in the same manner from local infection originating from somewhere. While as we have stated there are several sources in the body for the entrance of bacteria and their culture in a local focus, it is conceded that the mouth is the most common. In the mouth we have several sources for the entrance of bacteria. The tonsils commonly harbor the disease grems. We find them frequently in the disease known as pyorrhea, and we find them in abscesses about the roots of the teeth. It has been believed for a long time that acute infections may disseminate toxins which produce systemic manifestations. It was also recognized a long time ago that areas of local infections in one part of the body may set up secondary foci in other parts, as in diffuse nephritis which often follows acute attacks of tonsillitis. It has also been observed many times that septic emboli from wounds or as a result of surgical operations may be carried from the blood stream from the wound to distant parts and set up secondary infections. The knowledge of these facts is not new. If acute infections are able to produce disabling metastases why may not chronic infections cause the same? In fact they do. There is an abundance of clinical evidence in practically every hospital in the country showing this to be a fact. The prompt subsidence of secondary lesions such as iritis and neu-

ritis after the eradication of a primary focus, such as a chronic abscessed tooth, or the eradication of a pyorrhea pocket is stricking evidence of the relationship of mouth infections to secondary manifestations. Very few adults are without some form of infection in some part of the jaws. These lesions may be and sometimes are so small as to give the patient no physical discomfort whatever, and in a large majority of instances the knowledge of the same to the patient is not present. That serious manifestations are not more common as a result of this foci is probably due to two factors; first, the normal resistance of the individual; second, to the fact that the bacteria of chronic processes are usually of relatively low virulence. Rosenow has shown that these pathogenic organisms may not always remain of low virulence. He believes they have the property of mutations and the theory of mutations in animal life is that the variability in the germ plasm is such that it may at times give rise to morbid and permanent variations and these if advantageous to the animal are preserved by natural selection. So according to Rosenow these pathogenic organisms may be of low virulence today when the individual resistance is sufficient to take care of them and later if the patient's resistance becomes lowered the future generations of the same low virulent pathogenic organism may take on a different characteristic and with suitable environment and nutrition become exceedingly virulent. By getting into the blood or lymph streams, these organisms are carried to different parts of the body, and there set up secondary manifestations of diseases. There is an abundance of clinical evidence that such low grade infections may originate in the mouth. Lang of London reports 175 cases of iritis, 71 of which were due to mouth infections. Billings of Chicago reports 498 cases of chronic arthritis, 89 per cent of which show definite X-Ray evidence of alveolar abscesses. Billings also showed a second group of 70 patients of myostiti, neuritis, goitre, asthma and nephritis, 74 per cent of which had alveolar abscesses. Of course in many cases multiple infection may be To produce a cure, all contributing present in various parts of the body. causes must be removed. As we see it then, the patient's resistance must be the determining factor as to our advice to the patient. The resistance to infection may be lowered by a large variety of causes, such as drug habits, tuberculosis, anemia and other blood diseases, diseases of the ductless glands, lead poisoning, therapeutic use of mercury and potassium iodide, pregnancy, old age, over-work, lack of proper nourishment, faulty methods of living, etc. In these patients, oral and other forms of sepsis are a greater menace to health than in the case of normal individuals. A dentist sees two classes of individuals; healthy individuals and sick people. The patients who consult a physician are usually ill. For this reason the advice to an average patient given by a physican is usually more radical. The future dental treatments must be based more upon the results obtained by a more thorough examination of the patient. If the patient's resistance has been lowered through any cause, radical dentistry should be practiced. We must not overlook the fact that certain types of patients may tolerate successfully a certain class of dental work, whereby it would be a failure in another patient of less resistance. We should study the resistance of our patients. The physician should take into consideration the resistance of the patients before determining upon the extraction of teeth. We are not yet ready to say that devitalized teeth are a menace to mankind, neither are we ready to say that all patients may tolerate devitalized teeth. It is unfortunate that both the physician and dentist of today are depending too much upon X-Ray findings in making their diagnosis. The radiogram is not a picture of the pathology but a shadow of the conditions that are present. Many conditions may be read into a radiogram by the inexperienced. We must only use the radiogram in conjunction with the case history, physical diagnosis, etc. We must not overlook the fact that the radiogram is only one link in the whole chain of evidence from which we may formulate a judicious diagnosis. Knowing what we do of the far reaching effects of low grade infection, it is our

duty when a patient is suffering from systemic disease, to completely eradicate that infection wherever we may find it. Too often teeth are condemned by the physician when the origin of the infection may be in some other part of the body, due to incomplete examination.

In closing, I want to ask you gentlemen a favor. When you refer patients to the dentists don't send them there with instructions to have this or that tooth pulled. Frequently patients come to my office and say Dr. X sent me here to have this tooth pulled, just the same if I were to send them to you with instructions to remove appendix or leg.

DISCUSSION.

Dr. Lurie: I rise to add my simple words of commendation for Dr. Kelleher's paper and to coincide with him in much that he has said. In my own practice I have noted what would seem to be miraculous a cure of some chronic cases. In others there has been failure, much as the essayist has shown. Perhaps the failure has been in the lack of the proper consideration of the metastatic focus or the degree of destruction which has taken place and was then considered the diseased condition or site for treatment. In this connection I would like to ask Dr. Kelleher his opinion of such teeth as are often pictured with enlargement of the roots, as excementosis, with out alveolar destruction or disturbance of the lamina dura or infection. These cases are most often noted with cases of advanced arthritis of the deformans type. There has been nothing said of root canal surgery and the method of its practice nor what can be considered good root canal filling. What is the status of the devitalized tooth? Many questions such as these were sent out in questionnaire form by Dr. Byron Dowling of New York and in summing up from his hundred replies there was no agreement by the dental profession on any of the points. It would be interesting to learn what the local opinion is on these subjects, if Dr. Kelleher can enlighten us.

Dr. R. Lyons: I would like to compliment the essayist on a most interesting paper. The subject of focal infections, especially as regards the teeth, has been extensively investigated by the medical as well as dental professions during the past five or more years, and while much has been learned, the subject is far from exhausted.

It is a good sign to note that dentists and doctors are co-operating more and more for the purpose of detecting or eliminating the teeth as a source of infection. The wholesale extraction of teeth is no longer justifiable because a patient has an arthritis. The X-Ray has been one of the greatest aids in restricting this frequently unjustifiable procedure. Dr. Kelleher, tonight, did not enter into a discussion of the cases that are not materially benefited by proper dentistry even though no other foci of infection are demonstrable. It should be borne in mind by both physician, and dentists that long standing joint involvements due originally to mouth infections may not clear up after the elimination of the dental infection for the reason that the infecting organism has gained a foothold in one or more joints so that the removal of the original focus is like "closing the barndoor after the horse has escaped." Furthermore, a damaged joint will never be quite normal again. We should, therefore, be very guarded in our prognosis in long standing arthritic cases especially, for even the prominent may be a matter of, not weeks, but months.

Dr. Bass: Some years ago I became interested, with Dr. F. M. Johns, in the subject of pyorrhoea. Although we did not continue our studies our experience at that time led to certain definite impressions.

One of those impressions was that what is generally recognized and diagnosed as pyorrhoea and, in fact, the condition shown by Dr. Kelleher's picture tonight, is the advanced stage or end of a disease which has existed for many years. The early stages of the disease are not ordinarily recognized.

Another one of those impressions was that pyorrhoea is practically a universal disease of adult life and frequently before that time. I venture the opinion that pyorrhoea can be demonstrated in the mouth of every person here tonight.

I should also like to call attention to the fact that in the management of pyorrhoea dentists and others lay emphasis upon operative treatment, etc., to the neglect of the most important thing, viz, mouth hygiene, or properly brushing the teeth and cleansing the teeth at night before retiring.

Dr. Kelleher (closing): I wish to thank you gentlemen for the interest shown in my paper.

In reply to Dr. Jamison, as I have said before, there is no question that in the past too many teeth have been sacrificed in the search for a foci of infection when a proper diagnosis would have prevented this needless loss of teeth. However, it must be borne in mind that the teeth are only one factor to consider in our diagnosis, and if not the direct cause of disease may be a contributing cause and should be eradicated, which procedure would not show results unless the other contributing causes were also corrected.

Answering Dr. Johns' statement that he has never found infection on a tooth that was filled to the apical end, I wish to quote one recent case at Charity Hospital: A young nurse suffering from acute arthritis had two lower molars devitilized. Radiogram showed slight apical infection, also roots filled to apex; teeth were extracted under local anesthetic and sent to P. D. and were found to be streptococci.

Relative to the technique of extracting teeth, treatment of pyorrhea pockets and interpretation of dental radiograms discussed by Dr. Lurie, your chairman of the Scientific Program Committee has informed me that he plans to have several of my dental colleagues come before you, and I hope they will touch upon these subjects, which time forbids tonight.

New Orleans Medical and Surgical Journal

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WANTED: MORE CAREFUL MEDICAL WRITING.

It is certainly true that we, of the South, do not contribute our full share to medical literature; we are not as prolific, in this respect, as our Northern brethern. However, with our improved state medical organizations and, especially, the wonderful growth of the Southern Medical Association, we are doing much better than formerly and will soon "come into our own."

When we do write, we should try to word our papers in attractive style and be especially careful of our rhetoric and our grammar. There are numerous errors which we see quite often (too often) and we must confess that they are more commonly seen in the papers of our Southern confreres—which is doubtless due, to a large extent, to the fact mentioned above, i. e., that we are not as experienced writers as we should be. We refer, especially, to such as "operated" for "operated upon," "tubercular" for "tuberculous," "temperature" for "fever," etc. We feel satisfied that, in time, our diction will be as good as that in any other locality.

The object of this brief editorial is to call attention, not only to our lack of writings, comparatively speaking, but also to plead for clearness in expression and care as to literary style.

STEINMETZ.

"I do not wish to work for money. Let me draw it as I wish and if I draw too much, tell me. Do not fix an amount. If I think of money I will not work as well. Build me a house, if you wish, and a laboratory. That is all." Such was the agreement between Charles Proteus Steinmetz, the electrical wizzard, and the General Electric Company, of Schenectady.

This man, speaking a foreign tongue, handicapped with a congenital deformity of the spine, came to America and within the span of a bare quarter-century accomplished unbelieving feats with electricity. In his laboratory in Schenectady he had but recently generated "lightning" of a voltage that rivaled Vulcan himself.

Steinmetz died, October 26, 1923, of myocarditis, leaving virtually no estate. His books, papers, an old electric automobile, and a fifteen hundred dollar insurance policy, the same as is issued to all veteran employees of the General Electric Company, apparently comprise his entire worldly wealth. But though he is dead, his spirit will go on, for science will be indebted to Steinmetz for many years to come. His aims and ambitions, as expressed in his own words, proclaimed him as a true scientist. Medicine can well add her tribute along with all other branches of science to a man who unquestionably could have made millions, but who never drew a salary.

HOSPITAL EXPANSION.

The increasing number of private hospitals is evidence of the desire of many people to be cared for in these institutions. Any person who has been treated in a well regulated, properly operated hospital realizes the difference in institutional care and care at home. Supply and demand go together, therefore in many States as well as our own, a number of new hospitals are being organized and operated.

In New Orleans the Hotel Dieu has now under construction a new hospital unit which will be the last word in modern hospital construction. At the Touro Infirmary there is also in the course of construction a very large addition, which, when completed, will materially relieve the strain of present overcrowding at that institution. We expect to hear, at an early date, of the breaking of ground for the Dibert Memorial Tuberculosis Hospital which is so sorely needed in this community. With the completion of these three new hospital units we will have advanced materially towards bringing hospital organization back to pre-war status, at least, as regards accommodations sufficient for the needs of our city and surrounding territory.

With our medical confreres of Baton Rouge, we rejoice in the opening of their beautiful new Sanitarium, The Lady of the Lake. The name of the structure is as beautiful as the building itself. There is no question of the need of such an institution in our Capitol and, with the organization of its Staff, we can expect scientific contributions of no mean merit in the immediate future.

THE PUBLIC HEALTH NURSE.

The responsibilities of a public health nurse are very great and her qualifications and training should be commensurate with the responsible duties imposed upon her.

The following resolution pertaining to the necessary prerequisites for examination for certificate for public health nurses was recently adopted by the California State Board of Health:

Resolved, that aplicants for examination for certificate as public health nurse shall be:

1—Registered nurses under the laws of California, and

2—Shall have completed a public health nursing course of from four to eight months in a school approved by the California State Board of Health, or

3—Shall have completed at least a semester (four months) of post-graduate work in social service, including theory and practical work, or

4—Shall present evidence of having engaged in general public health nursing for at least two years in connection with a public health organization approved by the California State Board of Health.

5—All applications for examination as public health nurse shall be filed in the office of the California State Board of Health and shall be passed on by a committee of the board.

6—Upon examination, credit of 5 per cent will be given to applicants who have completed a four months' course in public health nursing, and 10 per cent to applicants who have completed an eight months' course in public health nursing.

THE STATE SOCIETY.

As this issue is about to go to press, the fiscal year of the Louisiana State Medical Society for 1923 passes into history. The State Medical Society has reasons to be proud of the record just made, as during the fiscal year 1174 active members were enrolled from the doctors of the State, the highest they have reached in the history of organized medicine. The numerical strength even surmounts the record made at the recent meeting of the American Medical Association in New Orleans, by thirty members. At that time we were materially assisted by the influence of a special representative from the American Medical Association, who toured our State in the soliciting of members, and also by the added interest which was naturally attracted by the meeting of the American Medical Association in Louisiana. So in the past year, this effort making can be only attributed to the increased activities of the various medical organizations and district societies of the State Medical Society. They have tried in

every way to make the State Society more attractive and of more personal benefit to each individual member of the Society. The gospel has even been carried into the remote sections of the State, resulting in new organizations where previously little or no medical organization occurred. The last two annual meetings of the State Society were attended by a larger number of members than ever previously recorded. This is simply a reflection of an increase of medical activities and medical interest.

The State Medical Society is going to be entertained at its next annual meeting in April, 1924, in Opelousas, by the hospitable physicians of St. Landry parish. These physicians with their usual display of good judgment, and far sight into the future, have seen in their wisdom to select Dr. Fred J. Mayer as the chairman of their local arrangement committee. Dr. Mayer is one of our ex-presidents, and it will be useless to state that they are acutely active and are initiating their plans for making the meeting the best and most satisfactory in the history of the State Society. To the many of us who are familiar with the natural attractions in Opelousas and close vicinities, it is useless to have pointed out the unusual stroke of nature in laying out this beauty spot of Southwest Louisiana. She blessed them with scenery unequalled, and endowed the same to men from which have sprung some of our most renowned physicians, who enjoy reputations of being hospitable in every true sense of the word. They are all co-operating jointly to make this meeting a great success. We are assured of ample hotel and other accommodations which should not distract in the least or tend to influence one to miss such an unusual opportunity. Opelousas realized her opportunities in having the State Society with her, and are making plans to excel any other city which have had the honor of entertaining the State Society. "Past records will not stand we must have a new one," seems to be their slogan.

Other than making the necessary plans incident to the social entertaining of its guests, you may feel confident that the scientific program, from all indications, will be up to the standard. From information now in our hands, we can feel assured of the attendance of two special representatives from the American Medical Association. The object desired to be accomplished by their attendance, is to assist the State Society from a viewpoint of organized medicine, and aid in every way possible to stimulate activities along some of the lines which are now foremost before the medical profession. We hope that their presence will add to the stimulation and result in their being able to come in contact with a larger representation of our State Society.

Indications are, therefore, for a most successful meeting. Make your plans early to attend.

PROCEEDINGS OF HOTEL DIEU STAFF

Dr. Homer Dupuy, President

Diathermy in Urology.

Dr. H. W. E. Walther demonstrated the new Fischer hospital diathermy unit and lauded its value in the treatment of certain urological conditions. Diathermy, the latest and unquestionably the most useful of the high frequency modalities, is employed in two forms—medical and surgical—both being generated in the same way, but applied differently. In medical diathermy we raise the temperature of tissues only within physiological limits; in surgical diathermy we far exceed this limit; destroying tissue. d'Arsonval current is used. Dr. Walther stated that much benefit to his patient had been noted in applying medical diathermy to cases of arthritis, prostatitis, seminal vesiculitis and epididymitis. The pain usually disappears after the first treatment and the swelling and period of confinement to bed are most favorably influenced. Applications require twenty minutes.

In surgical diathermy (electro-coagulation), where high frequency current is applied for the destruction of tissue by heat, without sparking, we have a modality for destroying new growths that is bloodless, clean, producing little shock, and which seals all lymph channels in its wake. For treating tumors of the bladder, cervix, urethra and external genitals, it surpasses scalpel-surgery.

Dr. Walther stated that he first became interested in surgical diathermy after a visit to Dr. Gustav Kolischer at Michael Reese Hospital, Chicago, where Kolischer has done commendable work with diathermy and radium in cancer of the bladder and of the prostate. It is today conceded by all that the only scientific way of handling malignant neoplasms of the bladder or prostate is through the open bladder. Some few selected vesical papilloma, of small size, can be successfully treated by diathermy and radium through the cystoscope. But the majority of bladder growths, extending from trigone into the internal vesical spincter, are best treated through the cystotomy wound. Kolischer lays stress upon the point that, in treating tumors of the lower urinary tract by means of diathermy, one requires an apparatus that will deliver up to 4000 M. A. current. This can only be obtained in the newer type of machines.

The results obtained with diathermy in the Urological Service of the Hotel Dieu will be reported in detail later in a special article on the subject. Dr. Walther acknowledged indebtedness to his associate, Dr. C. L. Peacock, for his valuable assistance in this work.

Dr. Dimitry: Dr. Walther's demonstration carries a message of assistance to those who handle malignant cases, for by his Diathermy demonstration he enlightens us on a procedure that may prove valuable in preventing metastasis i. e., if malignancy is accepted as a local and not a general condition. Surgery cares for the offending condition, but by removal it adds the possible danger of dissemination. The Deep X-ray is stated to be beneficial if administered a short while before operation for it is said to constrict surrounding lymphatics and vessels.

I have often desired, in my special line, to add still further precaution by the use of the hot iron, and I had hoped to have used this diathermy procedure, but lacked a working knowledge until this night, when the doctor has so well explained its use.

I would ask further enlightment of its use when the eye is to be removed for a malignancy. After the use of the diathermy needle, should we wait for a slough before proceeding with the knife and scissors to remove the eye?

Dr. Walther: It is best to wait several days to a week for each slough to come away before attempting removal of tumor mass.

Laminectomy for Intraspinal Pathology.

Dr. J .T. Nix: reported a case to stress the value of liminectomy for the most varied conditions involving the spinal cord. He believes the operation

should be done more often than it is, and feels that with proper care and study the operative mortality should be no higher than for other major surgical procedures.

Probably the best work on the subject is that of Elsberg's "Diagnosis and Treatment of Surgical Diseases of the Spinal Cord and its Membranes", published in 1916, from which the following is quoted:

"Opening the spinal canal has a profound effect upon the spinal cord and acts beneficially upon some spinal diseases, whose nature is, as yet, not clearly understood, and whose pathology is unknown." He goes on to state that he has observed these results in patients presenting signs of tumor, but in whom no tumor, nor visible evidence of pathology was found, in patients with symptoms and signs of multiple sclerosis, with indefinite sensory disturbances and in those presenting abnormalities of the spinal vessels. In many of these cases there was not increase of ultra spinal pressure nor other lesion of expanding character.

The case tonight is that of a young man, thirty-seven who gives a history of crushing injury between two cars about three years ago, after which, he was apparently well for two years. Beginning about January 1st, 1923 his legs began to get weak and unsteady, and he had a peculiar burning pain in the calves with cramps at night. The condition has gradually grown worse until just before admittance to the hospital his thighs at times would violently contract on abdomen, when lying down during the day, and all night even while asleep. Occasionally when standing if he should cough or sneeze, his legs would violently jerk up causing his to fall. There were no bladder or rectal symptoms, his Wasserman was negative, his physical examination and history revealed nothing. He was given two injections of Salvarsan without results.

Diagnosis made was Intraspinal irritation from tumor, pressure or spicule of bone. This was verified by Dr. Cazenavette who localized the irritation at level of 3rd lumbar vertebrae. Patient was kept under close observation for two months, when after showing no improvement operation was decided upon.

Laminectomy started under local anesthesia, but patient finally given gas with some ether. The laminae on right side were much thicker than on the left side and meninges of cord somewhat adherent. There was no evidence of increased pressure nor other pathology, excepting thickened laminae with adherent dura, so the membrane was not incised.

Patient for the past five days showed wonderful improvement, all symptoms disappearing entirely, then, they gradually returned until a large amount of serum was let out from under the skin incision. After this the symptoms rapidly disappeared again. For four days now there has been absolutely no signs of any discomfort, nor return of previous symptoms. We hope and expect to obtain a very good result.

His experience with laminectomy for spinal pathology has been limited to four cases. First: A case similar to the present one though more advanced, the patient being confined entirely to bed, and gives no history of injury. Operated in 1917 she completely recovered and attended all household duties for four years. In the eary part of 1922 she developed acute nephritis and died after a brief illness. At the time of her death she was fifty-four years of age.

Second case: Operated in 1920 evidence of spinal tumor at level of 3rd lumbar vertebrae. Dura opened, apparently the vessels were engorged but no tumor was found. Patient left one month later for California and no message has been received since.

Third case: Operated here about three months ago showed a tumor located at level of 9th. thoracic vertebrae. Section of tumor sent to laboratory, and report showed it to be malignant lioma. The tumor was too extensive to be removed, involving the entire circumference of meninges of the cord.

For the localization of the pathology Dr. Nix gave credit to the very able assistance of Dr. Cazenavette and his confrere, Dr. Perret.

In the few cases he has had there has been no operative mortality and the patients have recovered remarkably bet-

ter than he expected, there being very little apreciable shock.

In concluding he wished to emphasize that: All tumors of the spinal cord, cases of apparent ultra spinal pressure, all vertebral fracture with evidence of pressure and countless other conditions should have the benefit of laminectomy. It will prevent many an untimely death and save or restore health of many unfortunate paralytics.

Dr. Cazenavette: Through the kindness of Dr. Nix I saw two of the cases he referred to. The first was that of Mme. B., an elderly lady, who at the time of my visit on Sept. 3rd, 1923, complained of weakness and pains in the lower extremities and also of partial loss of control of bladder and rectum. The initial symptom consisted of pain in the back, radiating to the hips and thighs, began some five or six months previously. These pains were very severe and were pronounced at night. During the past two months she had had involuntary and uncontrolable movements in the limbs, frequently accompanied by severe pains. The bladder and rectal involvement were of about two weeks' duration.

The neurological examination revealed almost complete paralysis of both lower extremities, with occasional uncontrolable movements of flexion of thigh on abdomen. The deep reflexes, knee-jerk etc., were greatly exaggerated and Babinski and ankle clonus were present on both sides. Loss of sensation to touch and pain extended up to the umbilicus. No abnormal nervous symptoms were present above the waist line. The above symptoms with a history of gradual loss of control of bladder and rectum proved quite conclusively that we were dealing with a case of tumor at about the ninth segment.

At the time of my second visit, on Sept. 10th her condition was much aggrevated. There was then not only complete paralysis of motion and sensation in the lower limbs but also complete loss of rectal and vesical control. All the reflexes were abolished. The line of sensory demarkation was at the umbilicus on the right and a little lower on the left.

The cerobro-spinal fluid and serum examinations were negative for lues.

The operation, on Sept. 13th. revealed a glioma extending from the eighth to the tenth dorsal segment of cord.

The second case was that of Mr. D. who came to see me on Oct. 6th., 1923.

His complaint consisted of weakness in the right lower extremity and severe pain in the lumbar region. The pain was rather constant and worse at night. Some months ago he noticed the difficulty in walking. He could not raise the foot to clear the ground. This foot felt stiff and weak. Examination showed no atrophy of muscles of affected leg. But there was inability to move the leg and foot and also marked exaggeration of deep reflexes and Babinski. There was at times involuntary movements of the affected limb. The left leg was not affected and there was no affection of the bladder or rectum. Thorough search for sensory disturbances showed nothing but a hyperaesthetic area in the lumbar region (about 3rd lumbar). This area was also painful to touch.

These symptoms increased until he could not use leg at all and could not rest from the severity of the pain. There was present symptoms of meningeal irritation, causing involuntary movements in the right foot and leg.

The diagnosis made was that of probable tumor affecting the meninges and cauda at about level of third lumbar vertebrae.

The operation on Nov. 18th, 1923 showed evidence of projection of bone causing pressure on right side and adherent meninges on the left, at the third lumbar. Since the operation he has had no pain, no involuntary movements in limb and has regained some power in the leg.

Before closing this discussion I wish to emphasize the necessity of a neurolo gical examination in all cases of "backache", especially when this symptom is worse at night and in the recumbent position. Such an examination might reveal these pains to be of root or intraspinal origin and amenable to surgical intervention.

NEWS AND COMMENT

New Orleans, April 21, 1923.

To the Officers and Members, House of Delegates, L. S. M. S., New Orleans, La.:

Gentlemen:

Since the last meeting of the Louisiana State Medical Society, the Louisiana State Board of Medical Examiners has granted 84 original certificates, as follows:

Medicine and Surgery.

Examination	55
Reciprocity	9

Midwifery.

Examination	20

Of the 55 certificates issued after written examination, 3 were temporary permits, pending the applicants' completion of citizenship. Seven applicants failed to pass the examinations in medicine and surgery and 6 in midwifery; of the 17 applicants for undergraduate examination, 16 were successful and 1 unsuccessful.

The number of physicians legally qualified for 1922 was approximately 1,840, which is a slight increase on last year, taking into consideration the fact that fewer original certificates were issued in 1922—21 less than in 1921. This is evidence that the physicians were prompt in renewing.

The official list of physicians and surgeons, midwives and chiropodists for 1922 was sent to all practitioners and other interested parties, including the offices of the secretary of the Louisiana State Medical Society, Internal Revenue Department, Prohibition Director, Louisiana State Board of Health, District Attorneys and Clerks of Court. Only the names of those who had been issued original or renewed certificates for the year 1922, up to date of publication, were included therein. During this year, we continue to furnish your office and the various departments interested with lists of those who renew their certificates for 1923, and the current licenses of these Departments are issued accordingly.

Since our last report, the Board has held four regular meetings—two joint examination and business meetings and two business meetings. In addition, the members of the board went to Baton Rouge in June of 1922 to combine our efforts with those of the Louisiana State Medical Society when the chiropractic bill was placed before the Committee on Public Health and Sanitation of the State Legislature. We are glad to be able to say that this committee gave a unanimous unfavorable report on the chiropractic bill. We feel that we owe to the members of the committee and to all those who gave their assistance in killing this measure a vote of thanks for the stand they took in keping the regulation of the practice of medicine in its proper sphere in the State of Louisiana. We have every reason to believe that the chiropractors will bring up another bill before the Legislature next year, as we get inquiries almost daily in regard to chiropractic licensure in Louisiana. The board has been very active in the suppressing of the chiropractors who have come to Louisiana and we have succeeded, by personal interview, in stopping quite a few before they started. We believe that we have fewer chiropractors in Louisiana than in any other State in the Union; we have only one openly practicing and he leaves the State next month.

We might take this occasion to state the secretary of this board, Dr. Harrison, attended the Annual Congress on Medical Education, Medical Licensure, Public Health and Hospitals in Chicago recently. After a comparison of the problems which confront the other State boards, the secretary has returned to Louisiana confident of the fact that Louisiana has one of the strongest, if not the strongest medical law in the United States. As an instance which shows that we are not alone in our belief, we give the following excerpt from Dr. H. M. Platter's article "Enforcement of the Medical Practice Act" read at this meeting. "...I would invite your attention to the penalty sections of the Louisiana and Ohio laws. The former is superior in that it also includes procedure by injunction. Both

are sufficiently active to cause consternation in the ranks of organized opposition and I hope, bring to successful realization the protection of the public..."

During the past year, Washington and Tennessee were added to our list of States with which Louisiana reciprocates; this makes a total of 37. In checking over the requirements of the different States you will find that Louisiana ranks with the highest.

As a matter of general information we might say that the board has decided that on and after June, 1923, this board will give no examination in any other than the English language, a requirement exacted by nearly every State.

We beg to submit the following summary report, from audit of certified public accountant, through date of March 31, 1923. The detailed financial report is being sent the Governor, as is customary, and a copy of this report is also on file in our office. We would be very glad, at any time, to show the detailed report to anyone interested.

Condensed Cash Summary—March 31, 1922, to March 31, 1923.

Cash balance, March 31, 1922	$ 7,163.06
Receipts March 31, 1922, to March 31, 1923	6,509.04
Total	$13,672.10
Disbursements	6,374.62
Cash balance, March 31, 1923	$ 7,297.48

During this period $777.18 was expended for special investigations in alleged cases of violation and in violation proceedings. From the results obtained we feel that this amount was well spent. This expenditure was reduced to a minimum by the splendid co-operation which was given us by the office of the Attorney General. We appreciate, in particular, the earnest attention which the Hon. T. Semmes Walmsley, Assistant to the Attorney General, has rendered.

All cases of alleged violation reported by the board since the last meeting have been handled, either through the courts or by personal interview and communications. Many cases reported were satisfactorily adjusted after personal interview, when possible, with the reported parties. In some cases in which conclusive evidence had to be obtained, special investigators were employed by the board to investigate the charges made.

Forty-eight of these cases of alleged violation were placed in active file. They may be classified under the following headings: (a) practicing medicine without a license (miscellaneous); (b) osteopaths; (c) chiropractors; (d) optometrists; (e) various limited practitioners; (f) licensed practitioners; (g) licensed midwives; (h) druggists; (i) chiropodists; (j) miscellaneous. The present status of these cases is as follows:

Pending	11
Dismissed	20
Injunction	9
Conviction (court)	4
Criminal proceedings	1
Certificate reinstated	1
Deceased	1
Recommended for examination	1

In the case of Dr. Marble, who was a licensed physician who practiced chiropractic, we believe that he has been finally stopped from practicing anything whatsoever for, according to the office of the Attorney General, he leaves our State for parts unknown the early part of next month.

The board refused to renew for the year 1923 the certificates of four midwives and recently an injunction was taken out against another midwife, restraining her from practicing.

It might interest the profession to know that the Fife Brothers, Lake Charles, were tried for practicing medicine and convicted; they were refused writs of certiorari and prohibition by the Supreme Court of the State, the reasons given by the Supreme Court for its refusal to grant the writs being that..."the law defining the practice of medicine in Louisiana is constitutional and sound in principle..." The Fife Brothers were subsequently sentenced to 60 days in jail, and the judge admonished that if they came before him again on the same offense, and were convicted, he would give them a year in jail. We have been *informed* that the Fife Brothers are chiroprac-

tors. We wish to commend most highly the attitude and assistance of a number of the members of the medical profession of Lake Charles and the local legal authorities. More convictionc of this kind would be obtained if we could get the combined efforts of the medical profesion and the local State authorities, as was done in the Fife case.

We also feel that better results would be obtained if more physicians would report violators of the law, when they come in contact with them, and allow us to use their evidence. We assure the profession, and particularly those in the country, that if they will report cases of alleged violation coming to their attention, that we will take action for prosecution, if sufficient evidence is obtained.

In passing we might say that, with the exception of one or two minor cases, we have had very little complaint in regard to osteopaths. The secretary interviewed a number of beauty specialists who had been reported and, with one exception, matters were satisfactorily adjusted. In one case, the party is under criminal charges and the case is now pending. We have been informed that she intends to leave town. The secretary has also had personal interviews with several shoe dealers, who had clerks who had taken courses by mail, in regard to broken arches, etc., and we believe we have stopped most of that.

The term of office of Dr. Thos. E. Wright, Monroe, vice-president of the board, will expire on Augst 24, 1923, and recommendations should be made to the Governor for the vacancy at this meeting of the State Society. Dr. Wright has been a member of the board for six years, and we could always count upon him to stand for the interest of the board and organized medicine. We feel that Dr. Wright has been quite an asset to the board and it has been our pleasure to serve with him. His attendance and interest has always been 100 per cent.

Respectfully submitted,

Louisiana State Board of Medical Examiners,

By Roy B. Harrison, M. D.,
Secretary-Treasurer.

Monthly Bulletin of the Orleans Parish Medical Society.

Dr. Lucien A. LeDoux, Secretary.

The Society during the past month held two meetings. A scientific and a Joint Clinical Meeting with the Staff of the Charity Hospital. At the Scientific Meeting three papers were read.

At the Clinical Meeting cases were presented and discussed by Drs. Waldemar R. Metz, H. W. E. Walther, E. D. Fenner, J. E. Landry, Randolph Lyons, J. Birney Guthrie and J. A. Storck.

At the annual election held December 8th, 1923, the following members were elected to the Board of Directors for 1924:

Dr. S. Chaille Jamison, president; Dr. Urban Maes, first vice-president; Dr. Maurice J. Gelpi, second vice-president; Dr. E. A. Ficklen, third vice-president; Dr. Lucien A. LeDoux, secretary; Dr. John A. Lanford, treasurer; Dr. Daniel N. Silverman, librarian. Additional members Board of Directors: Dr. H. W. Kostmayer, Dr. J. J. Irwin and Dr. W. A. Reed.

The Scientific Meeting scheduled for December 24th, was dispensed with by the board.

Dr. S. F. Elder and Dr. Sara E. Huckaby were elected to active membership.

January Program.

January 7th, Joint Board Meeting; January 14th, Annual Installation Meeting; January 28th, Scientific Meeting.

A dinner was given December 4, 1923, at the Hotel Commodore, by the Rockefeller Foundation, in honor of a group of health officers representing eighteen foreign governments, who for the past three months have been in the United States under the auspices of the Health Section of the League of Nations for the study and observation of various types of public health organization.

Dr. George E. Vincent, president of the Foundation, presided at the dinner. Dr. William H. Welch, director of the Johns Hopkins University School of Hygiene and Public Health, in the absence of Dr. F. F. Russell, general director of the Foundation's International Health Board, extended greetings to the foreign visitors on behalf of the public health workers of the United States. The other speakers were: Mr. John D. Rockefeller, Jr., Chairman of the Board of Trustees of the Rockefeller Foundation; Dr. Hugh S. Cumming, Surgeon General of the United States Public Health Service; Dr. Linsly R. Williams, Managing Director of the National Tuberculosis Association; Dr. W. S. Rankin, State Health Officer, North Carolina, and Dr. Norman V. Lothian, of the Health Section of the League of Nations.

The visit of these health officials to the United States represented the third general interchange of public health personnel arranged by the Health Section of the League of Nations. The first took place in Belgium and Italy in 1922, and the second in England and Poland during February, March and April, 1923.

In the present group were representatives delegated by their respective governments, among them many of the most eminent sanitarians in the world, from France, England, Italy, Russia, Poland, Spain, Holland, Belgium, Greece, Jugoslavia, Germany, Switzerland, Norway, Mexico, Salvador, Brazil, Chile, and Canada.

The system of international interchange of public health personnel was made posible by a contribution to the Health Section of the League of Nations from the International Health Board of the Rockefeller Foundation, amounting to $60,080 a year, for a period of three years. The object of the plan is to bring the public health personnel of different countries into close relationship with each other, to effect a mutually profitable exchange of views on health subjects, to make comparative studies of health organization and legislation in different countries, and to promote international co-operation in establishing uniform standards for public health regulations.

The monthly meeting of the Shreveport Medical Society was held on November 6th, 1923.

Resolutions drawn up by the Memorial Committee commemorating the death of Dr. W. H. Billingsley and Dr. S. Y. Alexander were read. Dr. Ragan made a motion, which was seconded and passed, that the disposition of these resolutions be left to the judgment of the secretary.

Dr. R. H. Blackman read an interesting and instructive paper on "Uterine bleeding." Discussion by Drs. Bodenheimer, Heard, Barrow.

Dr. J. E. Heard read a valuable paper on "Regional Anaesthesia." Discussion by Drs. Ragan, Stamper, Johns, Bodenheimer, Pirkle.

Dr. Barrow showed a roentgenogram of a patient having a chest tumor, probably sarcoma, who improved remarkably under X-ray therapy.

Dr. Herold called attention to the Tri-State Medical Society meeting at Texarkana, Tex., December 5th and 6th.

R. T. Lucas,
Secretary.

There is a great deal of difference of opinion among medical men regarding the value of scopolamin as applied to criminology as demonstrated here by Dr. R. E. House of Ferris, Tex. The demonstration before the society was under most unsatisfactory conditions. The test at the Parish Prison proved more satisfactory. Those who watched the demonstration from beginning to end felt that there was a good deal of merit in his work.

The Public Health Committee of the American Medical Association has arranged with the local medical societies throughout the country to give monthly radio health talks. The Orleans Parish Medical Society, in conjunction with the radio station of Tulane University, will begin the program Friday, December 21st, between 8 and 9 p. m.

Dr. E. O. Trahan, of Baton Rouge, has been appointed Chairman of the Section on Bacteriology and Pathology;

and Dr. J. N. Roûssel, of New Orleans, has been appointed Chairman of the Section on Dermatology, for the approaching meeting of the Louisiana State Medical Society to be held in Opelousas. Those desiring to read papers are asked to get in touch with the chairmen as soon as possible.

At a recent meeting of the St. Landry Parish Medical Society the following were appointed Committee on Arrangements: Dr. Fred Mayer, chairman, Opelousas; Dr. B. A. Littell, Opelousas; Dr. J. N. Brown, Washington; Dr. W. R. Boudreau, Washington; Dr. F. C. Shute, Opelousas.

Washington, D. C., December 10, 1923.—The Department of Commerce announces that compilations made by the Bureau of the Census shows that the mortality rate for the registration area was 11.8 in 1922 per 100,000 population, against 11.6 in 1921. Six States, Michigan, Mississippi, Ohio, Pennsylvania, Virginia and Wisconsin show lower mortality rates for 1922 than for 1921. The lowest 1922 State rate (8.1) is shown for Idaho and the highest (14.7) for Maine and Vermont each For cities which at the last census had populations of 100,000 or more, the lowest rate (7.5) is shown for Akron, and the highest (17.8) for Memphis.

Appointment of Dr. S. Josephine Baker, of New York, as Consulting Director in Maternity and Infancy and Child Hygiene of the Children's Bureau of the United States Department of Labor, is announced by Grace Abbot, Chief of the Bureau.

Physicians and druggists throughout the country are receiving in their mail a card bearing an excellent likeness of Emil von Behring, the eminent bacteriologist, who is probably best known for his discovery of diphtheria Antitoxin. Inquiry reveals that this card is the first of a scientists' set being issued by the H. K. Mulford Co., Philadelphia.

Alvarenga Prize of the College of Physicians of Philadelphia.—The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Senor Alvarenga, and amounting to about Three hundred Dollars, will be made on July 14th, 1924, providing that an essay deemed by the Committee of Award to be worthy of the prize shall have been offered.

Essays intended for competition may be upon any subject in medicine, but can not have been published.

Examinations of candidates for entrance into the Regular Corps of the United States Public Health Service will be held at the following named places on the dates specified:

At Washington, D. C., January 7, 1924.

At Chicago, Ill., January 7, 1924.

At San Francisco, Ca., January 7, 1924.

Requests for information or permission to take this examination should be addressed to the Surgeon General United States Public Health Service, Washington, D. C.

H. S. Cumming,
Surgeon General.

At the December meeting of Shreveport Medical Society, the following officers were elected for 1924: President, Willis P. Butler; vice-presidents, I. Henry Smith and Edgar L. Sanderson; treasurer, Lewis Cass Spencer, re-elected; secretary, Robt. H. Lucas, re-elected. Delegates to the State Society will be selected at the January meeting.

Contracts have been let and work has been started on the new North Louisiana Sanitarium, on Hamilton Terrace, Louisiana avenue, Shreveport. It is to be a fire-proof building, modern in every respect, and will be owned and operated by Drs. Louis Abramson and A. A. Herold; when complete, together with out-buildings, etc., it is said that it will represent the outlay of approximately a quarter of a million dollars.

The Highland Sanitarium, Shreveport, is contemplating the erection of an annex to their already commodious institution; the contract will probably be awarded very soon.

The Tri-State Medical Society Meeting.

The Tri-State Medical Society of Arkansas, Louisiana and Texas held its nineteenth annual meeting in Texarkana, Tex., on December 5th and 6th, under the presidency of Dr. O. M. Heartsill of Marshall, Tex. Much interest was shown in the sessions, there being a total attendance of about 200. The papers were of high quality, visitors reading being Dr. Frank Smythe, of Memphis, on "Shockless Surgery"; Dr. J. C. Masson, of Mayo Clinic, on "Postoperative Ventral Hernia," and Dr. Grayson Carroll, of St. Louis, on "Ureteral Obstruction."

Dr. A. E. Chase, of Texarkana, Tex., was elected president for the ensuing year; Drs. L. J. Kosminsky, E. L. Sanderson and F. S. Littlejohn, vice-presidents for Arkansas, Louisiana and Texas, respectively; Dr. F. H. Walker, of Shreveport, La., was selected as secretary-treasurer for his seventh term. Shreveport was chosen as the meeting place for 1924.

Automobile Fatalities 1922.

Washington, D. C., December 3, 1923. The Department of Commerce announces that the returns compiled by the Bureau of the Census show that during the year 1922, 11,666 death resulting from accidents caused by automobiles and other motor vehicles (excluding motorcycles), occurred within the death registration area of the United States (exclusive of Hawaii), which area contains 85 per cent of the total population. This number represents a death rate of 12.5 per 100,000 population, as against 11.5 in 1921, 10.4 in 1920, 9.4 in 1919, 9.3 in 1918 and 9 in 1917. In the 27 States for which data for 1917 are available the actual number of those deaths increased from 6,014 in that year to 9,581 in 1922, the corresponding rates for these two years being 8.7 and 12.9.

The recent convention of the Radiological Society of North America was held in Rochester, Minn. It is the largest X-ray society in the world. Dr. Granger and Dr. Leon J. Menville of New Orleans, and Dr. Barrow of Shreveport, were in attendance. The convention was held on December 3rd to 8th, and was attended by a large number of its members, comprising the foremost radiologists of America and Canada.

Dr. Leon J. Menville, Councilor of the Radiological Society of North America, also ex-president of the State Radiological Society, and chairman of the House of Delegates of the Louisiana State Medical Society, was elected vice-president of the Radiological Society of North America. The next meeting will be held in Kansas City.

The Lafourche Valley Medical Society on November 20th, 1923, at 11:00 a. m., held a wonderful meeting as a guest of Drs. St. Martin of Houma, La., at the Elks' Home in Houma. The following participated in the Scientific program: Drs. W. E. Kittredge, of Tallieu; Thos. B. Pugh, Napoleonville; W. A. Martin; W. O. D. Jones, New Orleans, and R. C. Mooney, United States Veterans' Bureau. After the Scientific meeting, wihch was well attended, an elegant dinner was served at the Houma Hotel.

The American Association for the Study of Goiter, composed of goiter surgeons, pathologists, Anaesthetists, Internists and Radiologists, will have its annual meeting in Bloomington, Ill., the 23rd, 24th and 25th of next January.

Removals.

Dr. P. T. Talbot, from 1120 to 1112 Maison Blanche Building.

Dr. Wm. M. Johnson, from 1218 to 1112 Maison Blanche Building.

Dr. Wm. B. White, from Shreveport, La., to Stamford, Conn.

The following have moved their offices to the new Giddens-Lane Building in Shreveport: Drs. D. H. Alverson, S. C. Barrow, A. P. Crain, J. L. Ewing, Ellis and Butler, C. R. Gowan, W. S. Harmon, W. R. Harwell, J. F. O'Leary, M. R. Purnell, T. Ragan, O. C. Rigby, C. C. Sims, E. C. Simonton, W. P. Yerger.

Dr. W. E. Wilkinson, formrely of Gahagen, La., is now located at Haynesville.

Dr. J. C. Parrott, from Robeline, La., to Campti, La.

Dr. J. B. Glass, from Flora, La., to Robeline, La.

Dr. R. F. DeRouen, from Clarence, La., to Natchitoches, La.

Dr. W. N. Hankins, from Campti, La., to Alexandria, La.

DIED—Dr. Chester Owen Smith, Casapalca, Peru, November 23rd, 1923. Dr. Smith was born in the Parish of Winn, La., March 12th, 1896. Graduated from Jena High School in 1914; graduated from Tulane University in 1921. Served internship in Hospital Santo Tomas, Panama Canal Zone in 1922, after which he accepted a position with the Cerro de Pasco Copper Corporation, Casapalca, Peru, where he met his utimely demise from the dreaded malady, "Tropical Malaria."

DIED—Dr. S. W. Stafford, of New Orleans. Following an illness of several months, Dr. Stafford died suddenly on December 3rd, 1923, age 50 years. He was formerly superintendent of the Charity Hospital of New Orleans, and a prominent surgeon of this society.

DIED—On December 4th, Dr. I. E. Siess, of Alexandria, La.

DIED—Dr. W. M. Lynch, of New Orleans, on December 6th. Dr. Lynch was 68 years old.

DIED—On December 11th, 1923, at Chicago, Mr. Wm. Whitford, age 68 years.

Dr. W. H. Knolle will visit New Orleans during the holidays.

The Chairman of Section on Medicine wishes that all members who desire to present papers in this section, send their request, along with title of paper, at once, so that the section can be completed. Address care of the Louisiana State Medical Society, 1551 Canal street.

The conference of the Health Officers of Mississippi and Louisiana, held in New Orleans, December 13 and 14, was a notable success.

There were registered 136, among whom were representatives of the two State Boards of Health, directors of different bureaus, surgeons of the Illinois Central, Yazoo and Mississippi Valley and Southern Pacific railroads, sanitary engineers and public health nurses.

There was no set program, the discussions being led by men who had had experience in the various subjects selected. Among the speakers were: Dr. W. S. Leathers, State Health Officer of Mississippi; Dr. H. M. Bracken, of the American Social Hygiene Association, New York; Dr. L. D. Fricks, Surgeon United States Public Health Service, Memphis, Tenn.; Dr. John A. Ferrell, Director for the United States, International Health Board, New York; Dr. S. C. Beach, Health Officer, Illinois Central Railroad, Chicago; Dr. R. W. Knox, Chief Surgeon, Southern Pacific, Houston; Dr. J. Shirley Sweeney, of Johns Hopkins University; Dr. F. J. Underwood, Director of Child Welfare; Dr. Henry Boswell, Director Bureau of Tuberculosis; Dr. C. C. Applewhite, Director of Rural Sanitation, and Dr. W. W. Hall, President of the Mississippi State Board of Health. Dr. T. T. Tarlton, Dr. L. C. Chamberlain and Dr. B. A. Ledbetter, members Louisiana State Board of Health, and Dr. John Callan, Superintendent of Public Health, New Orleans, were present.

Dr. L. D. Fricks and Dr. C. P. Coogle gave a demonstration in diagnosis of splenic malaria. They had as subjects seven little boys.

Dr. W. H. Seeman, Bacteriologist for the Louisiana State Board of Health and New Orleans City Board of Health, gave a demonstration of the Schick test.

Great interest was shown, especially in the subjects of vital statistics, morbidity reports, railway sanitation and child hygiene.

Dr. Oscar Dowling and Dr. W. S. Leathers presided at the opening meeting. The other meetings were presided over alternately by health officers from Mississippi and Louisiana.